

# Exhibit 81

Judith Wolf, M.D.

Page 429

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NEW JERSEY

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 )  
 IN RE JOHNSON & JOHNSON )  
 TALCUM POWDER PRODUCTS ) MDL NO.  
 MARKETING, SALES PRACTICES, ) 16-2738 (FLW) (LHG)  
 AND PRODUCTS LIABILITY )  
 LITIGATION )  
 )  
 -----

IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS  
STATE OF MISSOURI

VALERIE SWANN, )  
 )  
 Plaintiff, )  
 ) Cause No.  
 v. ) 1422-CC09326-03  
 )  
 JOHNSON & JOHNSON, et al., )  
 )  
 Defendants. )  
 )

— — —  
 Tuesday, September 14, 2021  
 — — —

Oral Deposition of JUDITH WOLF, M.D.,  
VOLUME 2, held at the Fairmont Hotel, 101 Red  
River Street, Austin, Texas, commencing at  
8:53 a.m. CDT, on the above date, before  
Michael E. Miller, Fellow of the Academy of  
Professional Reporters, Certified Court  
Reporter, Registered Diplomate Reporter,  
Certified Realtime Reporter and Notary  
Public.

— — —  
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Judith Wolf, M.D.

Page 430	Page 432
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Page 431	Page 433
<p>1 APPEARANCES:</p> <p>2 FAEGRE DRINKER BIDDLE &amp; REATH LLP</p> <p>3 BY: ERIC M. FRIEDMAN, ESQUIRE</p> <p>4 eric.friedman@faegredrinker.com</p> <p>5 (via Zoom)</p> <p>6 300 North Meridian Street</p> <p>7 Suite 2500</p> <p>8 Indianapolis, Indiana 46204</p> <p>9 (317)237-0300</p> <p>10 Counsel for Johnson &amp; Johnson Defendants</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>1 DEPOSITION EXHIBITS</p> <p>2 NUMBER MARKED</p> <p>3 Wolf-40 Medical Record(s), 444</p> <p>4 LBONDURANT_PL_00012 -</p> <p>5 LBONDURANT_PL_00019</p> <p>6 Wolf-41 Medical Record(s), 445</p> <p>7 LBONDURANT_MDAMR_01215 -</p> <p>8 LBONDURANT_MDAMR_01216</p> <p>9 Wolf-42 NCI Definition of Gorlin 452</p> <p>10 Syndrome</p> <p>11 Wolf-43 The Association Between Talc 480</p> <p>12 Use and Ovarian Cancer, by</p> <p>13 Cramer et al</p> <p>14 Wolf-44 Genital Powder Use and Risk of 482</p> <p>15 Ovarian Cancer... by Terry</p> <p>16 et al</p> <p>17 Wolf-45 Perineal Talc Use and Ovarian 490</p> <p>18 Cancer... by Penninkilampi</p> <p>19 et al</p> <p>20 Wolf-46 Excerpt from Wolf MDL 496</p> <p>21 Deposition</p> <p>22 Wolf-47 Talc, Body Powder and Ovarian 497</p> <p>23 Cancer... by Wentzensen et al</p> <p>24</p> <p>25</p>

Judith Wolf, M.D.

Page 434				Page 436			
1	DEPOSITION EXHIBITS			1	-----		
2	Wolf-48	6/18/21 Godleski Expert Report	595	2	P R O C E E D I N G S		
3		re: Judkins		3	September 14, 2021, 8:53 a.m. CDT		
4	Wolf-49	Medical Record(s),	615	4	-----		
5		SWANNV_MBMC_0034		5	JUDITH WOLF, M.D.,		
6	Wolf-50	Excerpt from Lydia Huston	618	6	having been previously duly sworn,		
7		Deposition		7	testified as follows:		
8	Wolf-51	4/18/19 Godleski Expert Report	634	8	-----		
9		re: Swann		9	EXAMINATION		
10	Wolf-52	Genital Powder Use and Risk	640	10	-----		
11		for Ovarian Cancer... by Davis		11	BY MR. ZELLERS:		
12		et al		12	Q. Good morning, Dr. Wolf.		
13	Wolf-53	Excerpt from Lydia Huston	655	13	A. Good morning.		
14		Deposition		14	Q. I'd like to ask you some		
15	Wolf-54	Medical Record(s),	661	15	questions about Lynda Bondurant and the case		
16		SWANNV_ELBENDARYA_0035 -		16	that's been filed on her behalf.		
17		SWANNV_ELBENDARYA_0036		17	A. Okay.		
18	Wolf-55	Douching, Talc Use, and Risk	667	18	Q. You have prepared a		
19		of Ovarian Cancer, by Gonzalez		19	case-specific report regarding Ms. Bondurant;		
20		et al		20	is that right?		
21	Wolf-56	Curriculum Vitae	688	21	A. Yes.		
22				22	Q. We marked that yesterday as		
23				23	Deposition Exhibit 6, and you have that in		
24				24	front of you; is that right?		
25				25	A. Yes.		

Page 435				Page 437			
1	PREVIOUSLY MARKED EXHIBITS			1	Q. That report contains your		
2	NUMBER	PAGE		2	case-specific opinions with regard to		
3	Wolf-6	.....	436	3	Ms. Bondurant; is that right?		
4	Wolf-8	.....	575	4	A. Yes.		
5	Wolf-9	.....	610	5	Q. The first 21 pages of		
6	Wolf-20	.....	691	6	Exhibit 6, your report, is the same as the		
7	Wolf-37	.....	470	7	general amended report that we discussed		
8				8	yesterday, correct?		
9				9	A. Yes.		
10				10	Q. Ms. Bondurant had clear-cell		
11				11	carcinoma; is that right?		
12				12	A. Clear-cell carcinoma of the		
13				13	ovary, yes.		
14				14	Q. And it's your opinion, as		
15				15	stated on pages 22 to 24 of your report,		
16				16	Exhibit 6, that talcum powder is a		
17				17	substantial contributing cause of		
18				18	Ms. Bondurant's clear-cell cancer of the		
19				19	ovary; is that right?		
20				20	A. Yes.		
21				21	Q. You did not identify any other		
22				22	contributing causes of Ms. Bondurant's		
23				23	clear-cell ovarian cancer; is that right?		
24				24	A. I'm just relooking just to make		
25				25	sure that -- she did have a family history --		

3 (Pages 434 to 437)

Judith Wolf, M.D.

Page 438	Page 440
<p>1 although her genetic testing was negative, 2 she did have a family history of cancer that 3 was significant. 4 Q. Any other contributing causes 5 for Ms. Bondurant's clear-cell ovarian 6 cancer? 7 A. She gave a history of 8 endometriosis, but we don't have any 9 pathology or an operative report from her 10 hysterectomy when she had had that prior to 11 know whether that was pathologically 12 confirmed, which is -- endometriosis is 13 confirmed at the time of surgery. 14 Q. If, in fact, she did have 15 endometriosis, that would be a contributing 16 cause as well, correct? 17 A. It would be a risk factor. 18 Q. Any other contributing causes 19 or -- and let me stop there. 20 We talked yesterday, and I 21 believe you agreed, that there is a 22 difference between a risk factor and cause; 23 is that right? 24 A. Yes. 25 Q. You believe that in her case,</p>	<p>1 A. No. There are 300 -- 300,000 2 women every year in the U.S. who have 3 surgeries for ovarian masses, and 20,000 or 4 21,000 of them are ovarian cancer. Having a 5 benign mass on your ovary is not a risk 6 factor for ovarian cancer. 7 Q. And in your view, it's not -- 8 well, let me withdraw that. 9 You agree that -- strike that. 10 Do you agree that a 11 first-degree relative with ovarian or breast 12 cancer increases a woman's risk for ovarian 13 cancer? 14 A. So a first-degree relative with 15 ovarian cancer or a first-degree relative 16 with premenopausal breast cancer does, and so 17 she had -- her aunt would not be a 18 first-degree relative. Her mother -- I don't 19 know that we know what age her mother was 20 diagnosed with breast cancer. I don't have 21 that right in front of me. I'd have to look 22 through the records again. 23 But those two things, that she 24 has two family members with breast and 25 ovarian cancer, I think is a risk factor,</p>
Page 439	Page 441
<p>1 that talcum powder is a substantial 2 contributing cause, correct? 3 A. Yes. Yes. 4 Q. She does have other risk 5 factors which may be contributing causes. 6 Is that a fair summary of your 7 testimony? 8 A. Well, she had -- her other risk 9 factor that I know for sure that she has was 10 the family history. 11 Q. And that's the maternal aunt 12 with ovarian cancer; is that right? 13 A. Yes. 14 Q. And also a mother that had 15 breast cancer? 16 A. I'm just trying to find her 17 family history in my report. 18 Q. Page 24, I believe. 19 A. Yes. Maternal aunt with 20 ovarian cancer and mother with breast cancer. 21 Q. Ms. Bondurant's mother also had 22 an ovarian nonmalignant tumor; is that right? 23 A. That's no relationship to 24 ovarian cancer. 25 Q. That is not a risk factor?</p>	<p>1 even though her genetic testing is negative. 2 Q. This family history increases 3 her lifetime risk of ovarian cancer up to two 4 times; is that right? 5 A. Yes. 6 Q. Even though Ms. Bondurant 7 tested negative for BRCA, she still was at 8 two times increased risk for ovarian cancer, 9 given her family history of a first-degree 10 relative with breast cancer and maternal aunt 11 with ovarian cancer, correct? 12 DR. THOMPSON: Object to form. 13 A. So given that she has this 14 family history, I think she's still at 15 increased risk. 16 BY MR. ZELLERS: 17 Q. Her family history would be a 18 significant contributing cause; is that your 19 opinion? 20 A. It's a risk factor. 21 Q. All right. It's a risk factor, 22 and it could be a significant contributing 23 cause, fair? 24 A. Well, ovarian cancer is a 25 multifactorial disease, and if she had a</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 442</p> <p>1 genetic predisposition, if we knew that she 2 had one, that would still just be one of the 3 factors that could lead to ovarian cancer, 4 but in and of itself doesn't necessarily 5 cause ovarian cancer. 6 Q. It may or may not in a given 7 woman's case, correct? 8 DR. THOMPSON: Object to form. 9 A. It may or may not what? 10 BY MR. ZELLERS: 11 Q. Cause ovarian cancer or be a 12 substantial contributing cause. 13 A. It could be a contributing 14 cause. 15 Q. All right. Ms. Bondurant's 16 family also has a significant history of 17 other cancer in her family, correct? 18 A. Yes. 19 Q. She has a -- or had a brother 20 with non-Hodgkin's lymphoma? 21 A. Yes. 22 Q. A maternal grandmother with 23 lymphoma? 24 A. Yes. 25 Q. An aunt with lung cancer?</p>	<p style="text-align: right;">Page 444</p> <p>1 A. Okay. 2 Q. We'll mark a portion of the 3 medical records, and specifically a progress 4 note with Dr. Shank from November 13, 2018, 5 pages 12 to 19 of the records that were 6 produced, as Exhibit 40. 7 (Whereupon, Deposition Exhibit 8 Wolf-40, Medical Record(s), 9 LBONDURANT_PL_00012 - 10 LBONDURANT_PL_00019, was marked for 11 identification.) 12 BY MR. ZELLERS: 13 Q. And so if you go... 14 A. I'm looking at her family 15 history. 16 Q. Okay. 17 (Document review.) 18 A. This one says maternal -- 19 mother with ovarian nonmalignant tumor. 20 Brother alive, nonsmall cell lung cancer and 21 lymphoma. Maternal aunt deceased with 22 ovarian cancer. Maternal grandmother 23 lymphoma, denies history of breast cancer, 24 endometrial cancer and colon cancer. 25 ///</p>
<p style="text-align: right;">Page 443</p> <p>1 A. Yes. 2 Q. Uncle with throat cancer? 3 A. Yes. 4 Q. Maternal great aunt with breast 5 cancer? 6 A. I don't remember the maternal 7 great aunt. I don't have that right here, 8 but... 9 Q. All right. That would be a 10 significant history, correct, if that's, in 11 fact, true? 12 DR. THOMPSON: Object to form. 13 A. It would be a history. 14 BY MR. ZELLERS: 15 Q. First cousin with pancreatic 16 cancer? 17 DR. THOMPSON: Object to form. 18 A. Yeah, I -- 19 BY MR. ZELLERS: 20 Q. Let me show you -- 21 A. Let me see that part, because I 22 don't have that whole part of her history in 23 front of me. 24 Q. That's okay. I'll refresh your 25 recollection here.</p>	<p style="text-align: right;">Page 445</p> <p>1 BY MR. ZELLERS: 2 Q. Doctor, let me mark a second 3 record, which I think will contain the other 4 portion of the history that is pertinent. 5 Exhibit 41, these are the 6 MD Anderson Cancer Center records or excerpts 7 from them, pages 1215 to 1216. 8 (Whereupon, Deposition Exhibit 9 Wolf-41, Medical Record(s), 10 LBONDURANT_MDAMR_01215 - 11 LBONDURANT_MDAMR_01216, was marked for 12 identification.) 13 A. So there's a maternal great 14 aunt with cervical cancer, maternal uncle 15 with throat cancer, brother with lymphoma, 16 maternal aunt with ovarian cancer; maternal 17 grandmother, non-Hodgkin's lymphoma; maternal 18 uncle, pancreatic cancer; a lung cancer in an 19 aunt and an uncle, and another uncle. 20 That's all I see. I don't see 21 any pancreatic cancer. 22 BY MR. ZELLERS: 23 Q. Well, if you look on page 1216, 24 the second page, problem, pancreatic 25 cancer --</p>

5 (Pages 442 to 445)

Judith Wolf, M.D.

Page 446	Page 448
<p>1 A. Oh, maternal uncle, yeah.  2 Maternal uncle.  3 You said something about a  4 great aunt who had ovarian cancer?  5 Q. Breast cancer.  6 A. Lung cancer, lung cancer.  7 I'm not seeing that.  8 Q. Look on the first page, if you  9 will.  10 A. Breast cancer, maternal aunt.  11 Oh, her great aunt. Okay. Daughter, cervix,  12 precancer of the cervix. Okay.  13 Q. You'd agree that this is a  14 significant history of other cancers in her  15 family, correct?  16 A. The other cancers don't have  17 anything to do with ovarian cancer other than  18 the maternal great aunt with breast cancer.  19 Q. So it's your testimony that  20 none of these other cancers are relevant in  21 terms of any increased risk for ovarian  22 cancer?  23 A. So pancreatic cancer can be for  24 BRCA2 mutations, but she did not have one of  25 those. Lung cancer would not be. Throat</p>	<p>1 A. Not as far as I'm aware.  2 Q. All right.  3 DR. THOMPSON: And you did not  4 ask a question. You said that --  5 MR. ZELLERS: Ms. Thompson,  6 please. You can object to form, but  7 we don't need to argue.  8 DR. THOMPSON: Okay. But you  9 didn't ask a question, so I'm --  10 Dr. Wolf was right.  11 BY MR. ZELLERS:  12 Q. Ms. Bondurant's genetic testing  13 identified a pathologic variant of the SDHA  14 gene and a variant of uncertain significance,  15 VUS, in the PTCH1 gene, correct?  16 A. You know what? Can I see her  17 report again? I thought I had it in here,  18 but I don't see it.  19 Q. I think you have it in your  20 report, page 23.  21 A. Oh, I do. Yes.  22 Q. You agree that she did have a  23 genetic mutation, correct?  24 A. Not one that is related to  25 ovarian cancer. The SDHA gene is not one</p>
Page 447	Page 449
<p>1 cancer would not be. Non-Hodgkin's lymphoma  2 would not be.  3 Q. Do you agree that her family  4 history of numerous sporadic cancers suggests  5 some type of genetic predisposition?  6 DR. THOMPSON: Object to form.  7 A. No. The first thing that comes  8 to my mind is that with all the lung cancers  9 and the throat cancer, that maybe there's  10 some smoking in the family, in particular  11 knowing that she was a smoker.  12 BY MR. ZELLERS:  13 Q. Well, that would not impact the  14 breast cancer, would it?  15 A. I didn't mention the breast  16 cancer. I said the lung cancer and the  17 throat cancer.  18 Q. That would not impact the  19 pancreatic cancer, correct?  20 A. That's not what I said.  21 Q. I'm asking you a question,  22 Doctor.  23 A. And the question?  24 Q. Is smoking a risk factor for  25 pancreatic cancer?</p>	<p>1 that increases the risk of ovarian cancer,  2 and a variant of uncertain significance  3 doesn't mean anything.  4 MR. ZELLERS: Move to strike as  5 nonresponsive.  6 BY MR. ZELLERS:  7 Q. Is it --  8 DR. THOMPSON: Move to -- that  9 it was responsive.  10 MR. ZELLERS: Okay.  11 Ms. Thompson, you can object as to  12 form --  13 DR. THOMPSON: Okay.  14 MR. ZELLERS: -- but you don't  15 have to be making commentary as we go  16 along.  17 DR. THOMPSON: Well, I can't  18 object to the form of the question  19 when it wasn't a question, and I'm --  20 you made a motion to strike, and I'm  21 saying it was responsive. And I think  22 I am allowed to do that.  23 MR. ZELLERS: Well, hopefully  24 it won't continue, but --  25 DR. THOMPSON: Well, we'll see</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 450</p> <p>1 what the questioning is like.  2 BY MR. ZELLERS:  3 Q. She did have a genetic  4 mutation; that was my question.  5 DR. THOMPSON: Object to form.  6 A. In a gene that is not related  7 to ovarian cancer.  8 BY MR. ZELLERS:  9 Q. Is that a yes?  10 DR. THOMPSON: Object to form.  11 A. In a gene that is not related  12 to ovarian cancer, yes, she had mutation, but  13 it's not related to ovarian cancer.  14 BY MR. ZELLERS:  15 Q. VUS is a mutation where the  16 association with disease is unclear, correct?  17 DR. THOMPSON: Object to form.  18 A. It's a variant, yes, a change  19 in the gene that has unclear significance.  20 BY MR. ZELLERS:  21 Q. VUS mutations are tracked to  22 see how many women with cancer have them; is  23 that right?  24 DR. THOMPSON: Object to form.  25 A. VUSs are tracked to see if</p>	<p style="text-align: right;">Page 452</p> <p>1 BY MR. ZELLERS:  2 Q. Ovarian cancer would be  3 included in the cancers that are being  4 tracked, correct?  5 A. Yes.  6 Q. All right. Are you familiar  7 with Gorlin syndrome?  8 A. Not offhand.  9 MR. ZELLERS: Please mark as  10 Deposition Exhibit 42 a statement from  11 NIH, National Cancer Institute, on  12 Gorlin syndrome.  13 (Whereupon, Deposition Exhibit  14 Wolf-42, NCI Definition of Gorlin  15 Syndrome, was marked for  16 identification.)  17 BY MR. ZELLERS:  18 Q. Have you had a chance to review  19 Exhibit --  20 A. Yeah. Now that I see it  21 spelled out, I remember vaguely in medical  22 school a long time ago learning about Gorlin  23 syndrome, but...  24 Q. National Cancer Institute says:  25 Gorlin syndrome is caused by a mutation or</p>
<p style="text-align: right;">Page 451</p> <p>1 any -- at any point in the future, there's  2 any relationship to increased risk for  3 cancers.  4 BY MR. ZELLERS:  5 Q. If the same VUS is seen in more  6 woman, then science may identify a new gene  7 that increases the risk of ovarian cancer,  8 correct? That's the reason it's being  9 tracked.  10 DR. THOMPSON: Object to form.  11 A. I didn't understand what you  12 said. It didn't make sense to me. Can you  13 repeat it again, please?  14 BY MR. ZELLERS:  15 Q. Sure.  16 VUSs are tracked, and if the  17 same VUS is seen in more women, then science  18 may identify a new gene that increases the  19 risk of ovarian cancer, correct? That's why  20 it's being tracked?  21 DR. THOMPSON: Object to form.  22 A. They're not being tracked just  23 to look for ovarian cancer. They're being  24 tracked to see if there's any increased risk  25 in men or women of any cancers.</p>	<p style="text-align: right;">Page 453</p> <p>1 change in the PTCH1 gene.  2 Is that right?  3 A. Yes.  4 Q. And that's what Ms. Bondurant's  5 genetic testing showed, a mutation VUS in the  6 PTCH1 gene, correct?  7 DR. THOMPSON: Object to form.  8 A. She had a variant of uncertain  9 significance in the PTCH gene 1. And in  10 Gorlin syndrome, it is not associated with  11 ovarian cancer -- reading this from the  12 National Cancer Institute that you showed  13 me -- it's associated --  14 BY MR. ZELLERS:  15 Q. Where does it say that it's not  16 associated with ovarian cancer?  17 A. It says it's associated with  18 basal cell skin cancers, medulloblastomas,  19 which are brain cancers, and other types of  20 cancers. It can cause benign, noncancerous,  21 tumors in the jaw, heart or ovaries.  22 Q. It says: And other types of  23 cancer. It doesn't say and other types of  24 cancer that may be benign.  25 DR. THOMPSON: Object to form.</p>

7 (Pages 450 to 453)



Judith Wolf, M.D.

<p style="text-align: right;">Page 454</p> <p>1 A. But it says specifically benign 2 tumors of the ovary. 3 BY MR. ZELLERS: 4 Q. Okay. You -- other than what 5 I've just shown you -- don't know about or at 6 least don't recall learning about Gorlin 7 syndrome, correct? 8 DR. THOMPSON: Object to form. 9 A. What you showed me was -- is 10 from the National Cancer Institute, which 11 describes what Gorlin syndrome is, and it 12 specifically says it can cause benign cancers 13 of the ovary, but a very high risk of 14 developing basal cell skin cancers during 15 adolescence or early adulthood. 16 Neither Ms. Bondurant nor any 17 of her family members have any history of 18 that, or medulloblastoma or any type of brain 19 cancer. 20 And this does not list any of 21 the cancers that are in her family as 22 increased risk with Gorlin syndrome. 23 BY MR. ZELLERS: 24 Q. It says in the second and third 25 sentence: They are also at risk of</p>	<p style="text-align: right;">Page 456</p> <p>1 tissues in the body? 2 A. Yes. 3 Q. Inherited means genetic 4 information passes from parent to child; is 5 that right? 6 A. Yes. 7 Q. Ms. Bondurant's mother had a 8 benign -- had a benign ovarian tumor; is that 9 right? 10 A. She did. 11 Q. And a benign ovarian tumor 12 would be consistent with Gorlin syndrome, as 13 you've pointed out, correct? 14 DR. THOMPSON: Object to form. 15 A. It's something that can happen 16 in Gorlin syndrome, but I would expect that 17 either her mother or someone in her family, 18 if this was Gorlin syndrome, had basal cell 19 skin cancers. 20 And, again, this says nothing 21 about it causing ovarian cancer. And why in 22 the world would it say it causes benign 23 ovarian tumors, because that doesn't kill 24 people and ovarian cancer does, if ovarian 25 cancer was one of the cancers that was</p>
<p style="text-align: right;">Page 455</p> <p>1 developing medulloblastoma-type of brain 2 cancer and other types of cancer, correct? 3 A. And the next sentence says: It 4 can also cause benign, noncancer tumors in 5 the jaws, heart or ovaries. And the next 6 sentence says: Other signs and symptoms 7 include a large head, unusual facial 8 features, small pits on the skin or the hands 9 or the feet. 10 There's no -- in her records, 11 there's no indication that she has any of 12 those physical findings that would suggest 13 Gorlin syndrome. 14 Q. Gorlin syndrome is a rare 15 inherited disorder; is that right? 16 A. Yes. 17 Q. That affects many organs and 18 tissues in the body, correct? 19 A. And it's also called basal cell 20 nevroid syndrome because people get basal cell 21 cancers at a young age. 22 MR. ZELLERS: Move to strike as 23 nonresponsive. 24 BY MR. ZELLERS: 25 Q. Does it affect many organs and</p>	<p style="text-align: right;">Page 457</p> <p>1 significantly associated with Gorlin 2 syndrome? 3 Additionally, she doesn't have 4 a mutation that's known to have any clinical 5 significance in this gene, the PTCH1 gene. 6 MR. ZELLERS: Doctor, move to 7 strike as nonresponsive. 8 BY MR. ZELLERS: 9 Q. Here's my question -- 10 DR. THOMPSON: Responsive. 11 BY MR. ZELLERS: 12 Q. My question is: A benign tumor 13 would be consistent with Gorlin syndrome; is 14 that true? 15 DR. THOMPSON: Object to form. 16 A. Multiple benign tumors are 17 consistent with Gorlin syndrome. 18 BY MR. ZELLERS: 19 Q. Thank you. 20 Even if the PTCH1 genes are not 21 directly related to ovarian cancer, do you 22 agree that her family history and PTCH1 23 mutation raises the question that 24 Ms. Bondurant had an inherited mutation? 25 DR. THOMPSON: Object to form.</p>

8 (Pages 454 to 457)

Judith Wolf, M.D.

<p style="text-align: right;">Page 458</p> <p>1 A. No, I do not agree with that.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. I want you to assume that a</p> <p>4 patient comes to you with a genetic mutation,</p> <p>5 maternal aunt with ovarian cancer, mother</p> <p>6 with breast cancer, and she's worried about</p> <p>7 getting ovarian cancer. She's 58, healthy,</p> <p>8 done having children, and still has her</p> <p>9 uterus and ovaries.</p> <p>10 How would you counsel that</p> <p>11 patient?</p> <p>12 DR. THOMPSON: Object to form,</p> <p>13 incomplete --</p> <p>14 A. You said that she has a --</p> <p>15 DR. THOMPSON: Hang on. Object</p> <p>16 to form, incomplete hypothetical.</p> <p>17 A. You said that she has a genetic</p> <p>18 mutation. What is her genetic mutation?</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. The genetic mutation would be a</p> <p>21 VUS.</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. A VUS of what?</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Doctor, we don't -- I mean --</p>	<p style="text-align: right;">Page 460</p> <p>1 maternal aunt with ovarian cancer, mother</p> <p>2 with breast cancer, and she's worried about</p> <p>3 getting ovarian cancer. She's 58, healthy,</p> <p>4 done having children, still has her uterus</p> <p>5 and ovaries.</p> <p>6 How would you counsel that</p> <p>7 patient?</p> <p>8 DR. THOMPSON: Object to form,</p> <p>9 incomplete hypothetical.</p> <p>10 A. That her family history of</p> <p>11 breast and ovarian cancer may increase her</p> <p>12 risk for ovarian cancer. That the VUS and</p> <p>13 the PTCH1 gene, which I assume is the same as</p> <p>14 what you said before, that's the one we're</p> <p>15 talking about, has no impact on her risk of</p> <p>16 ovarian cancer. That's what I would tell</p> <p>17 her.</p> <p>18 I wouldn't recommend that she</p> <p>19 have any additional testing done or any</p> <p>20 surgical intervention.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Would you recommend a</p> <p>23 prophylactic hysterectomy and a bilateral</p> <p>24 salpingo-oophorectomy?</p> <p>25 DR. THOMPSON: Objection, asked</p>
<p style="text-align: right;">Page 459</p> <p>1 A. Well, you wouldn't know that</p> <p>2 somebody has a VUS unless you knew what that</p> <p>3 VUS was -- what gene it was associated with.</p> <p>4 Q. All right. A VUS in the PTCH1</p> <p>5 gene.</p> <p>6 A. And the question is: What</p> <p>7 would I --</p> <p>8 Q. What would you advise the</p> <p>9 patient? How would you counsel that patient?</p> <p>10 A. That that VUS in the PTCH1</p> <p>11 gene, there's no evidence that increases her</p> <p>12 risk for ovarian cancer.</p> <p>13 Q. So how would you counsel the</p> <p>14 patient? Would you tell her she has no risk</p> <p>15 for ovarian cancer?</p> <p>16 DR. THOMPSON: Object to form,</p> <p>17 asked and answered.</p> <p>18 A. Every woman who has ovaries has</p> <p>19 a risk for ovarian cancer.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. Okay. So is that all the</p> <p>22 counsel you would do?</p> <p>23 A. With her -- tell me what you --</p> <p>24 her family history is again?</p> <p>25 Q. So she has a genetic mutation,</p>	<p style="text-align: right;">Page 461</p> <p>1 and answered.</p> <p>2 A. I already answered that I would</p> <p>3 not recommend any surgery.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. She is at increased risk of</p> <p>6 ovarian cancer. You'd agree with that,</p> <p>7 right?</p> <p>8 A. With her family's history. It</p> <p>9 has nothing to do with the VUS and the PTCH1</p> <p>10 gene.</p> <p>11 Q. What about a woman with no</p> <p>12 family history of cancer, no gene mutations,</p> <p>13 no risk factors except for talc?</p> <p>14 A. She's also at increased risk</p> <p>15 for ovarian cancer.</p> <p>16 Q. And how would you counsel that</p> <p>17 woman?</p> <p>18 A. I would counsel her to stop</p> <p>19 using talc.</p> <p>20 Q. Anything else?</p> <p>21 A. No.</p> <p>22 Q. Ms. Bondurant had a history of</p> <p>23 endometriosis; is that right?</p> <p>24 A. She gave a clinical history.</p> <p>25 We don't have -- I don't have any pathologic</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 462</p> <p>1 confirmation of that or surgical 2 confirmation. 3 Q. As we talked yesterday, 4 endometriosis is a risk factor for ovarian 5 cancer; is that right? 6 A. Endometriosis is a risk factor 7 for ovarian cancer. 8 Q. You did not include 9 endometriosis as a potential risk factor for 10 Ms. Bondurant because we do not have 11 pathology or an operative report from her 12 hysterectomy to confirm this. 13 That's on page 24 of your 14 report. Is that right? 15 DR. THOMPSON: Object to form. 16 A. That's not what I -- it says. 17 I said did she have other risk factors, and I 18 listed endometriosis -- 19 BY MR. ZELLERS: 20 Q. The quote I have on page 24 of 21 your report is you did not include 22 endometriosis as a potential risk factor 23 because, quote: We do not have pathology or 24 an operative report from her hysterectomy to 25 confirm this.</p>	<p style="text-align: right;">Page 464</p> <p>1 that or not include that. 2 Q. Well, you're aware that 3 Ms. Bondurant herself, before she passed, 4 reported that she was diagnosed with 5 endometriosis by Dr. Gardner in 1980, 6 correct? 7 A. Yes. 8 Q. She also reported to her 9 gynecologic oncologist, Dr. Shank, that she 10 had a history of endometriosis; is that 11 right? 12 A. Yes. 13 Q. Wouldn't Ms. Bondurant have 14 been a reliable source of information as to 15 whether she had been diagnosed with 16 endometriosis? 17 DR. THOMPSON: Object to form. 18 A. The only way to diagnose 19 endometriosis is via surgery, and I'm not 20 aware that she had any surgery in 1980 that 21 would have confirmed that. 22 BY MR. ZELLERS: 23 Q. So the only legitimate way or 24 viable way to diagnose endometriosis is when 25 a woman has surgery?</p>
<p style="text-align: right;">Page 463</p> <p>1 Did I miss -- 2 DR. THOMPSON: Object to form. 3 Can you show us the quote? 4 A. Can you show -- because that's 5 not what it says on my report here. 6 BY MR. ZELLERS: 7 Q. So I'm looking at page 24, 8 number 7. 9 A. Yes. 10 Q. This is Exhibit 6. 11 Endometriosis. We do not have pathology or 12 an operative report from her hysterectomy to 13 confirm this. 14 Are those your words? 15 A. Those are my words. What you 16 said before was that I said I discounted this 17 or I did not consider this because we don't 18 have that. 19 Q. All right. So you would 20 include endometriosis as a potential risk 21 factor, fair? 22 A. So I'm saying that -- I'm 23 saying exactly what she says there. She 24 gives a history. I don't have a confirmation 25 of it. So I don't know whether to include</p>	<p style="text-align: right;">Page 465</p> <p>1 A. In order to diagnose 2 endometriosis, the standard way to diagnose 3 it is to do surgery to look to see if you 4 find it. In most women that's done via 5 laparoscopy. Some women have a laparotomy, a 6 bigger incision in the abdomen. 7 There are symptoms of 8 endometriosis, but you can't confirm it 9 without surgery. 10 Q. So you, as a treating 11 physician, if you had a patient who told you 12 that she had been diagnosed with 13 endometriosis, you would not rely on that and 14 you would not believe that patient unless she 15 showed you or proved it to you in some way 16 with medical records? 17 DR. THOMPSON: Object to form. 18 A. I would ask her how was it 19 diagnosed, and if she didn't have a surgical 20 diagnosis, I would assume it was presumed 21 endometriosis without any confirmation. 22 BY MR. ZELLERS: 23 Q. All right. Well, neither 24 Dr. Gardner nor Dr. Shank say presumed 25 endometriosis, do they?</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 466</p> <p>1 DR. THOMPSON: Object to form.</p> <p>2 A. That's neither here nor there</p> <p>3 to me. You asked me what I would do.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. All right. So you would not</p> <p>6 believe a patient unless they had a surgical</p> <p>7 record that they had endometriosis?</p> <p>8 DR. THOMPSON: Object to form.</p> <p>9 A. I would not confirm the</p> <p>10 diagnosis of endometriosis without -- without</p> <p>11 surgical intervention to prove it. I'm not</p> <p>12 saying the patient is lying.</p> <p>13 I'm saying that the patient --</p> <p>14 someone may have told her she had</p> <p>15 endometriosis, but without surgical</p> <p>16 confirmation, you can't make the diagnosis.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. So if a patient,</p> <p>19 hypothetically, came to you and said that</p> <p>20 they had endometriosis --</p> <p>21 A. I would ask them how was it</p> <p>22 diagnosed.</p> <p>23 Q. All right. And if they said I</p> <p>24 had surgical confirmation, you would accept</p> <p>25 that?</p>	<p style="text-align: right;">Page 468</p> <p>1 the most important thing was figuring out</p> <p>2 what was going on and taking care of her</p> <p>3 ovarian cancer.</p> <p>4 And what he or she -- again, I</p> <p>5 don't know if it's a man or a woman -- put in</p> <p>6 their chart, I'm not in charge of that.</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. Same question with Dr. Gardner.</p> <p>9 It would be --</p> <p>10 A. Same answer.</p> <p>11 Q. -- wrong -- okay.</p> <p>12 You do rely on your patients to</p> <p>13 give you their medical history when they come</p> <p>14 to see you, correct?</p> <p>15 A. Yes.</p> <p>16 Q. And do you generally believe</p> <p>17 women when they give you their medical</p> <p>18 history?</p> <p>19 A. I said it's not that I wouldn't</p> <p>20 believe someone who told me they had</p> <p>21 endometriosis. I would not consider it</p> <p>22 confirmed unless I had a diagnosis that</p> <p>23 confirmed it.</p> <p>24 Q. And so you would not consider</p> <p>25 it in a differential diagnosis unless you had</p>
<p style="text-align: right;">Page 467</p> <p>1 A. Yes.</p> <p>2 Q. And if they didn't say they had</p> <p>3 surgical confirmation, you would reject it</p> <p>4 and consider them not to be truthful, or at</p> <p>5 least not to have had a history of</p> <p>6 endometriosis?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. You are putting words in my</p> <p>9 mouth. What I said was that I would consider</p> <p>10 it presumed endometriosis without</p> <p>11 confirmation.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. Would it have been wrong for</p> <p>14 Dr. Shank to have accepted her history of</p> <p>15 endometriosis --</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. -- without surgical</p> <p>19 confirmation?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. Dr. Shank is free to do</p> <p>22 whatever he wants in his medical records,</p> <p>23 and -- and I can't remember if Dr. Shank was</p> <p>24 her gynecologic oncologist at the time of her</p> <p>25 diagnosis, but at the time of her diagnosis,</p>	<p style="text-align: right;">Page 469</p> <p>1 proof, surgical confirmation of</p> <p>2 endometriosis?</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. Is that your testimony?</p> <p>6 A. No. A differential diagnosis</p> <p>7 is when somebody has symptoms or findings,</p> <p>8 clinical findings or symptoms, and you say</p> <p>9 what could be causing this? Well, it could</p> <p>10 be this or this or this. And if one of those</p> <p>11 things is endometriosis, the way I would</p> <p>12 confirm that or rule it out would be surgery.</p> <p>13 And that is the standard of care.</p> <p>14 Q. Do you agree that</p> <p>15 endometriosis, if, in fact, Ms. Bondurant had</p> <p>16 endometriosis, would double a woman's risk of</p> <p>17 clear-cell ovarian cancer?</p> <p>18 DR. THOMPSON: Object to form.</p> <p>19 A. It increases her risk of</p> <p>20 ovarian cancer for sure --</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Would it --</p> <p>23 A. -- endometriosis.</p> <p>24 Q. Would it double her risk?</p> <p>25 A. The risk is about twice, yes,</p>

11 (Pages 466 to 469)

Judith Wolf, M.D.

Page 470	Page 472
<p>1 twice the general population.</p> <p>2 Q. We looked yesterday at</p> <p>3 Deposition Exhibit 37. You probably don't</p> <p>4 have it. I'll hand you -- this is 37.</p> <p>5 MR. ZELLERS: And,</p> <p>6 Ms. Thompson, I gave it to you</p> <p>7 yesterday. Can you let the witness</p> <p>8 just take a look at it just so we</p> <p>9 don't have to dig out the whole stack?</p> <p>10 DR. THOMPSON: Yes, of course.</p> <p>11 THE WITNESS: Thank you.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. So this is an article, Risk of</p> <p>14 Gynecologic Cancer According to the Type of</p> <p>15 Endometriosis, and we looked at this</p> <p>16 yesterday.</p> <p>17 A. Yes.</p> <p>18 Q. First named author is</p> <p>19 Saavalainen.</p> <p>20 A. You practiced that last night.</p> <p>21 Q. This study assessed the risk of</p> <p>22 gynecological cancer according to the type of</p> <p>23 endometriosis in women with surgically</p> <p>24 verified endometriosis; is that right?</p> <p>25 A. Yes.</p>	<p>1 on her ovary, her risk of ovarian cancer is</p> <p>2 not 1,000 times --</p> <p>3 Q. Well --</p> <p>4 A. -- higher than someone who</p> <p>5 doesn't have endometriosis.</p> <p>6 Q. The relative risk, at least</p> <p>7 according to this paper, would be 10.1, with</p> <p>8 a confidence interval of 5.50 to 16.9,</p> <p>9 correct?</p> <p>10 A. That's what the confidence</p> <p>11 interval is, but if what you're saying is</p> <p>12 true, and there are a million women in the</p> <p>13 U.S. who had known proven endometriosis, even</p> <p>14 if we just took all of them, that would mean</p> <p>15 that their chance of ovarian cancer was 1,000</p> <p>16 times higher or 500 times higher than the</p> <p>17 general population? That's just not true.</p> <p>18 That's just not true.</p> <p>19 We'd have way more clear-cell</p> <p>20 endometrial cancers -- clear-cell ovarian</p> <p>21 cancers than there are in the U.S.</p> <p>22 Clear-cell ovarian cancer counts for about 5%</p> <p>23 of epithelial ovarian cancers, so that would</p> <p>24 be about a thousand women a year.</p> <p>25 If a million people had</p>
Page 471	Page 473
<p>1 Q. And then if you look on page 1,</p> <p>2 under Results -- and I think we may have</p> <p>3 looked at this yesterday in terms of</p> <p>4 endometriosis, but specifically under</p> <p>5 Results, these authors found that</p> <p>6 endometriosis was associated with increased</p> <p>7 risk of clear-cell of 5.17; is that right?</p> <p>8 A. Yes.</p> <p>9 Q. The risk of ovarian cancer was</p> <p>10 highest among women with ovarian</p> <p>11 endometriosis, and especially for clear-cell,</p> <p>12 with a hazard ratio or relative risk of 10.1.</p> <p>13 A. So that's for women who have</p> <p>14 their endometriosis on the ovaries. Yes.</p> <p>15 Endometriosis, in general, is the 5.</p> <p>16 Q. And if, in fact, a woman had</p> <p>17 endometriosis on the ovaries, then she would</p> <p>18 be at a 1000% increased risk of clear-cell</p> <p>19 ovarian cancer; is that right?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. No, that's not what that means.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. What does that mean? What</p> <p>24 would the increased risk be?</p> <p>25 A. So if someone has endometriosis</p>	<p>1 endometriosis and their risk of getting</p> <p>2 clear-cell cancer was 500 or 1,000 times</p> <p>3 greater than somebody who doesn't have it, we</p> <p>4 would have way more clear-cell cancers than</p> <p>5 we do.</p> <p>6 Q. And when you speak of this,</p> <p>7 you're speaking of women who have been</p> <p>8 diagnosed with ovarian endometriosis,</p> <p>9 correct?</p> <p>10 A. Well, I -- no, I'm speaking</p> <p>11 that in the United States, approximately</p> <p>12 a million to 2 million women have</p> <p>13 endometriosis.</p> <p>14 Q. All right. So you're not</p> <p>15 speaking of ovarian endometriosis, which was</p> <p>16 my question and my reference to the 1,000%</p> <p>17 increased risk of clear-cell ovarian cancer.</p> <p>18 A. What percentage of women have</p> <p>19 ovarian endometriosis? Let's see. That's</p> <p>20 probably in this study.</p> <p>21 (Document review.)</p> <p>22 A. I don't see that in this study.</p> <p>23 Endometriosis...</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. All right. Well, if we look at</p>

12 (Pages 470 to 473)



Judith Wolf, M.D.

<p style="text-align: right;">Page 474</p> <p>1 just the --</p> <p>2 A. No. Stop. One second.</p> <p>3 So there were 49,000 women in</p> <p>4 the study and 23,000 had ovarian cancer --</p> <p>5 ovarian endometriosis, so can we round that</p> <p>6 to half.</p> <p>7 And so that would be if</p> <p>8 somewhere between 500,000 and a million women</p> <p>9 had ovarian endometriosis, then their chances</p> <p>10 of getting clear-cell ovarian cancer was</p> <p>11 1,000 times higher than the general</p> <p>12 population, and we would see a lot more</p> <p>13 clear-cell ovarian cancer than we do.</p> <p>14 Q. You're not disputing the</p> <p>15 results. You may be disputing my question</p> <p>16 and my interpretation of the results, but</p> <p>17 you're not disputing that, at least according</p> <p>18 to this article, Deposition Exhibit 37, that</p> <p>19 regardless of the type of endometriosis, this</p> <p>20 study found an increased risk of clear-cell</p> <p>21 ovarian cancer of 5.17, correct?</p> <p>22 A. I'm not disputing that result.</p> <p>23 Q. And similarly, the authors</p> <p>24 found an increased risk -- if it was ovarian</p> <p>25 endometriosis, there was an increased risk of</p>	<p style="text-align: right;">Page 476</p> <p>1 correct?</p> <p>2 A. So endometriosis overall</p> <p>3 increases the risk of ovarian cancer about</p> <p>4 twice. The types of cancer that happen that</p> <p>5 arise in association with or in an area of</p> <p>6 endometriosis more commonly are clear-cell or</p> <p>7 endometrioid type.</p> <p>8 Q. Did you review, in connection</p> <p>9 with your opinion here, Dr. McTiernan's</p> <p>10 testimony in the Forrest trial?</p> <p>11 A. The Forrest trial?</p> <p>12 Q. Yes.</p> <p>13 A. Not that I recall.</p> <p>14 Q. You do respect Dr. McTiernan as</p> <p>15 an epidemiologist, correct?</p> <p>16 A. Yes.</p> <p>17 Q. And you included, I think we</p> <p>18 discussed yesterday, the Forrest plots in</p> <p>19 your report?</p> <p>20 A. The plots, yeah.</p> <p>21 Q. Are you aware that</p> <p>22 Dr. McTiernan testified that the literature</p> <p>23 is consistent with a relative risk of 3 for</p> <p>24 endometriosis and clear-cell ovarian cancer?</p> <p>25 A. What -- I'm not aware of that,</p>
<p style="text-align: right;">Page 475</p> <p>1 clear-cell ovarian cancer of 10.1, correct?</p> <p>2 DR. THOMPSON: Whoa. You're</p> <p>3 talking about the risk ratio reported?</p> <p>4 MR. ZELLERS: Yes, I'm talking</p> <p>5 about what the authors found.</p> <p>6 DR. THOMPSON: All right.</p> <p>7 MR. ZELLERS: The risk --</p> <p>8 DR. THOMPSON: Well, you</p> <p>9 weren't really saying what the authors</p> <p>10 found.</p> <p>11 MR. ZELLERS: I think that was</p> <p>12 in my question, but if not, that's</p> <p>13 what I meant.</p> <p>14 A. The incidence ratio, yes, was 5</p> <p>15 for all endometriosis -- types of</p> <p>16 endometriosis and 10 for ovarian</p> <p>17 endometriosis.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. In terms of an increased risk</p> <p>20 for clear-cell ovarian cancer, correct?</p> <p>21 A. That's correct.</p> <p>22 Q. You know from reviewing the</p> <p>23 literature that endometriosis is associated</p> <p>24 with a high relative risk, especially or</p> <p>25 specifically with clear-cell ovarian cancer,</p>	<p style="text-align: right;">Page 477</p> <p>1 and I'd like to ask: What is the Forrest</p> <p>2 trial? Is that a paper that I should see?</p> <p>3 Q. No. I'm sorry. That's a trial</p> <p>4 much like the Kleiner trial that you</p> <p>5 testified in.</p> <p>6 A. Oh, okay.</p> <p>7 Q. Forrest is the name.</p> <p>8 A. In my head it was a clinical</p> <p>9 medical trial.</p> <p>10 Q. Understood.</p> <p>11 You're just unaware of what her</p> <p>12 testimony was?</p> <p>13 A. I'm unaware of her testimony,</p> <p>14 that's correct.</p> <p>15 Q. Does it sound right that the</p> <p>16 literature is consistent with a relative risk</p> <p>17 of 3 for endometriosis and clear-cell ovarian</p> <p>18 cancer?</p> <p>19 A. It's somewhere 2 or more.</p> <p>20 Q. Okay. Page 23 of your report</p> <p>21 says that clear-cell is a histologic subtype</p> <p>22 associated with genital talcum powder use in</p> <p>23 multiple studies.</p> <p>24 Do you see that?</p> <p>25 A. Yes.</p>

13 (Pages 474 to 477)

Judith Wolf, M.D.

<p style="text-align: right;">Page 478</p> <p>1 Q. What studies support your 2 opinion that clear-cell carcinoma is 3 associated with genital talc use? 4 A. So in some of the studies, 5 subtypes were separated out and some were 6 not, and, again, clear-cell is not common. 7 In the -- in the Schildkraut 8 study, they lumped clear-cell with 9 endometrioid and other subtypes, and it was 10 increased risk. 11 In the Terry study, which 12 looked at eight studies, there were enough 13 that they were able to show a statistical 14 significant increased risk of, I think, 1.24. 15 Q. Okay. Terry is the only study 16 that you reviewed or that you're aware of 17 that shows a statistically significant 18 increased risk for clear-cell ovarian cancer, 19 correct? 20 DR. THOMPSON: Object to form. 21 A. As I just said, most of the 22 studies don't have enough or did not separate 23 out clear-cell separately to show a 24 statistical significant increase. 25 The Schildkraut study, when</p>	<p style="text-align: right;">Page 480</p> <p>1 Q. Have you explored the 2 discrepancy in the clear-cell data that's 3 reported in Terry's paper versus the same 4 data on clear-cell that's reported in the 5 Cramer 2016 study? 6 DR. THOMPSON: Object to form. 7 A. No. 8 Can I see those papers? 9 BY MR. ZELLERS: 10 Q. I have Cramer 2016. Let's mark 11 that as Exhibit 43. 12 (Whereupon, Deposition Exhibit 13 Wolf-43, The Association Between Talc 14 Use and Ovarian Cancer, by Cramer 15 et al, was marked for identification.) 16 (Comments off the stenographic 17 record.) 18 A. And the Terry study? Can I 19 have the Terry study? 20 BY MR. ZELLERS: 21 Q. I don't believe I have a copy 22 of Terry. 23 THE WITNESS: Do any of you 24 have the Terry study? 25 ///</p>
<p style="text-align: right;">Page 479</p> <p>1 they looked at the nonserous together, which 2 I believe were endometrioid, clear-cell or 3 undifferentiated, there was a statistical 4 significance. 5 And the Terry study, which took 6 eight studies and looked at them together, 7 there were close to 200 clear-cells, and 8 there was a statistical significance. 9 BY MR. ZELLERS: 10 Q. If we're looking at clear-cell 11 ovarian cancer, the only study that shows a 12 statistically significant increased risk for 13 ovarian cancer is the Terry study, correct? 14 DR. THOMPSON: Object to form. 15 A. Because there were too few 16 cases in most of the studies, that -- yes. 17 BY MR. ZELLERS: 18 Q. Are you aware that the Terry 19 study is based on clear-cell data from the 20 New England Consortium? 21 A. The OCAC Consortium, is that 22 what you're calling the New England 23 Consortium? 24 Q. Yes. 25 A. Yes.</p>	<p style="text-align: right;">Page 481</p> <p>1 BY MR. ZELLERS: 2 Q. Let me see if I've got it. 3 So I did not bring a copy of 4 Terry. 5 A. I need to see them side by side 6 so I can answer questions, comparing them. 7 Q. Let me ask you some questions, 8 and then if you can't answer the questions 9 because you -- 10 A. I want to see them side by 11 side, so -- 12 Q. Doctor, I'm going to ask you 13 questions. If you can't answer the question 14 because you don't have the Terry study in 15 front of you, you can tell me you can't 16 answer the question. 17 A. Okay. 18 DR. THOMPSON: We'll pull it up 19 on the computer. Just hold on a 20 minute. 21 THE WITNESS: Thank you. Okay. 22 MR. ZELLERS: All right. 23 BY MR. ZELLERS: 24 Q. So you now have Terry 2013 25 available to you electronically; is that</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 482</p> <p>1 right?</p> <p>2 A. Yes.</p> <p>3 MR. ZELLERS: And we will</p> <p>4 supplement the record and we'll mark</p> <p>5 Terry as Exhibit 44.</p> <p>6 (Whereupon, Deposition Exhibit</p> <p>7 Wolf-44, Genital Powder Use and Risk</p> <p>8 of Ovarian Cancer... by Terry et al,</p> <p>9 was marked for identification.)</p> <p>10 MR. ZELLERS: It's the Terry</p> <p>11 2013 study.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. Are you able to tell the number</p> <p>14 of cases of clear-cell cancers, ovarian</p> <p>15 cancers that Terry is reporting?</p> <p>16 A. 187.</p> <p>17 Q. Are you able to tell the number</p> <p>18 of clear-cell ovarian cancers reported in the</p> <p>19 Cramer 2016 study?</p> <p>20 A. I'm looking for that.</p> <p>21 (Document review.)</p> <p>22 A. I'm assuming it's in one of the</p> <p>23 tables, and I keep fumbling through them.</p> <p>24 I'm sorry. Just give me one minute. Okay.</p> <p>25 114.</p>	<p style="text-align: right;">Page 484</p> <p>1 A. Terry, the results, on</p> <p>2 page 815.</p> <p>3 I don't see a number in the</p> <p>4 results for Cramer. I'll try to add all of</p> <p>5 the patients. 2,000, 3,000 -- there were</p> <p>6 about 4,000, 4500, so there were less</p> <p>7 patients in the Cramer study.</p> <p>8 Q. I want to ask you a couple of</p> <p>9 hypothetical questions. We did that</p> <p>10 yesterday.</p> <p>11 I want you to assume that both</p> <p>12 Cramer 2016 and Terry 2013 are looking at the</p> <p>13 same dataset with respect to clear-cell</p> <p>14 ovarian cancer cases. And I want you to</p> <p>15 assume that Terry is misreporting the number</p> <p>16 of cases of clear-cell, but that Dr. Cramer</p> <p>17 got it right.</p> <p>18 Cramer, at least in his</p> <p>19 publication, 2016, finds no association</p> <p>20 between talc use and clear-cell; is that</p> <p>21 right?</p> <p>22 And I'm looking at page 341.</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. Are we talking about a</p> <p>25 hypothetical situation?</p>
<p style="text-align: right;">Page 483</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. And you're looking where?</p> <p>3 A. Table 4.</p> <p>4 Q. Do you have any understanding</p> <p>5 of why Terry would be reporting 187 cases of</p> <p>6 clear-cell ovarian cancer and Cramer is</p> <p>7 reporting 114 if they obtained the data, the</p> <p>8 clear-cell ovarian cancer data, from the same</p> <p>9 source?</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 A. I'm looking for the total</p> <p>12 number of patients in each study to see if</p> <p>13 they had -- I see that they both were looking</p> <p>14 at the OCAC, the consortium, and I'm looking</p> <p>15 for the total number of patients, because the</p> <p>16 Terry study, their study population was a</p> <p>17 total of -- I mean, that could be one reason,</p> <p>18 that they included or excluded different</p> <p>19 patients. And so even if they were starting</p> <p>20 with the same group, the ones that they</p> <p>21 looked at in the end -- oh, this pooled study</p> <p>22 of 8 case-controlled studies included 8,525</p> <p>23 ovarian cancer cases.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. What are you looking at, Terry?</p>	<p style="text-align: right;">Page 485</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. No. Let me withdraw my</p> <p>3 hypothetical --</p> <p>4 A. Okay.</p> <p>5 Q. -- and let me now ask you the</p> <p>6 question in terms of Cramer 2016 with the</p> <p>7 clear-cell ovarian cancer cases that were</p> <p>8 available that he analyzed, he found no</p> <p>9 association between talc use and clear-cell</p> <p>10 ovarian cancer, correct?</p> <p>11 DR. THOMPSON: Object to form.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. And that's page 341 under</p> <p>14 Discussion on the right-hand side.</p> <p>15 A. Well, can we look at it in the</p> <p>16 results instead of the discussion?</p> <p>17 Q. Before we go to results, Cramer</p> <p>18 states: There was general agreement on risk</p> <p>19 by histologic type of epithelial ovarian</p> <p>20 cancer except that OCAC, O-C-A-C, found an</p> <p>21 association with clear-cell cancer, and we</p> <p>22 did not.</p> <p>23 Did I read that correctly?</p> <p>24 A. That's a sentence in his</p> <p>25 discussion. You read it correctly.</p>

15 (Pages 482 to 485)

Judith Wolf, M.D.

<p style="text-align: right;">Page 486</p> <p>1 Q. All right. So hypothetically, 2 if there was an error in the Terry study and 3 that both Terry and Cramer were looking at 4 the same dataset and had the same number of 5 ovarian cancer cases, you would not have any 6 epidemiology to rely on to support your 7 opinion that talcum powder use causes 8 clear-cell ovarian cancer, correct? 9 DR. THOMPSON: Object to form. 10 BY MR. ZELLERS: 11 Q. And that's a hypothetical. 12 DR. THOMPSON: Object to form. 13 A. That's not the case, though. 14 BY MR. ZELLERS: 15 Q. Well, you don't know that 16 that's not the case. 17 DR. THOMPSON: Object to form. 18 A. I don't have any evidence to 19 support that that's the case. 20 If you have some evidence to 21 support that's the case, can you show it to 22 me? 23 BY MR. ZELLERS: 24 Q. Well, we know that both Terry 25 and Cramer obtained their data --</p>	<p style="text-align: right;">Page 488</p> <p>1 insinuate that there's something wrong with 2 the OCAC study. 3 Q. The Terry study is the only 4 study that you are relying upon from an 5 epidemiologic standpoint that shows a 6 statistically significant association between 7 clear-cell ovarian cancer and talcum powder 8 use, correct? 9 DR. THOMPSON: Object to form. 10 A. The Terry study is the study 11 that has the most cases of clear-cell ovarian 12 cancer and found a statistically significant 13 difference. They combined eight studies to 14 find that. 15 And the Schildkraut study found 16 an increased association -- excuse me, 17 significant association of nonserous cancers, 18 which included clear-cell and endometrioid. 19 BY MR. ZELLERS: 20 Q. But was not limited to 21 clear-cell ovarian cancers, correct? 22 A. There were not enough cases, as 23 is the case with most studies. 24 Q. I think we're in agreement that 25 of the studies that you've looked at, Terry</p>
<p style="text-align: right;">Page 487</p> <p>1 (Interruption by the 2 stenographer.) 3 BY MR. ZELLERS: 4 Q. They obtained their data from 5 the same dataset; is that right? 6 A. Well, that's what I'm trying to 7 figure out. In the methods, it's not clear 8 to me that they did. 9 Q. And, Doctor, that's fair, and 10 we've probably gone as far as we can go. 11 On the data Cramer had, he did 12 not find an association between clear-cell 13 ovarian cancer and talc use, correct? 14 DR. THOMPSON: Object to form. 15 A. Cramer's paper did not show a 16 statistical significant difference. Terry's 17 did. 18 BY MR. ZELLERS: 19 Q. And Cramer actually states that 20 OCAC found an association with clear-cell 21 cancer and he did not. Those are the words 22 he uses, correct? 23 A. Those are the words he uses. 24 That does not prove to me that there's 25 something wrong with the OCAC study; does not</p>	<p style="text-align: right;">Page 489</p> <p>1 is the only one, if we're looking just at the 2 clear-cell ovarian cancer subtype, which 3 shows a statistically significant association 4 between talcum powder use and ovarian cancer, 5 correct? 6 DR. THOMPSON: Object to form. 7 A. I will say I think we're in 8 agreement that most of the studies do not 9 have enough clear-cells to show an 10 association. That would be considered 11 underpowered. There's not enough cases. 12 The Terry study had the largest 13 number of cases of clear-cell and it did show 14 a statistical significance. 15 BY MR. ZELLERS: 16 Q. You know that Penninkilampi is 17 a more recent meta-analysis than the Terry 18 study, correct? 19 A. That's correct. 20 Q. Penninkilampi shows no 21 association between clear-cell ovarian cancer 22 and talc use. 23 A. Can I see Penninkilampi's 24 study? 25 Q. Sure.</p>

16 (Pages 486 to 489)

Judith Wolf, M.D.

<p style="text-align: right;">Page 490</p> <p>1 MR. ZELLERS: We'll mark 2 Penninkilampi 2018 as Exhibit 45. 3 (Whereupon, Deposition Exhibit 4 Wolf-45, Perineal Talc Use and Ovarian 5 Cancer... by Penninkilampi et al, was 6 marked for identification.) 7 BY MR. ZELLERS: 8 Q. So, Doctor, take as much time 9 as you need to, to look at this, but I'm 10 looking at the Abstract, and I'm looking at 11 the very last couple of lines under Results, 12 before Conclusion. 13 A. Well, I'm looking at Table 2, 14 which separates out the types of ovarian 15 cancer and said that there were three studies 16 that looked at clear-cell, but it doesn't 17 give me the number of clear-cell cases. 18 So I don't know how many 19 clear-cell cases they actually were able to 20 find in this study. 21 Q. If you look at the Abstract 22 under Results, the very last line, 23 Penninkilampi and the authors state: We 24 found an increased risk of serous and 25 endometrioid, but not mucinous or clear-cell</p>	<p style="text-align: right;">Page 492</p> <p>1 figure out how many there were. 2 BY MR. ZELLERS: 3 Q. Would that be important to do 4 to substantiate or validate your opinions in 5 this case? 6 A. It would be additional 7 information. 8 Q. At least as of today, that's 9 not something that you have done, correct? 10 A. It's not. 11 Q. You did not include a separate 12 Bradford Hill analysis for clear-cell 13 carcinoma in your report; is that right? 14 A. I did not. 15 Q. And you've not done a Bradford 16 Hill analysis on the epidemiology of 17 clear-cell ovarian cancer exposure to talcum 18 powder, correct? 19 A. I have not separately, no. 20 Q. Are you aware that the O'Brien, 21 the Berge, the Taher, the Wong, the Mills, 22 the Rosenblatt, and the Cramer 1999 and 23 Cramer 2016 studies find no association with 24 clear-cell ovarian cancer and talcum powder 25 use?</p>
<p style="text-align: right;">Page 491</p> <p>1 subtypes. 2 Is that correct? 3 A. That's what this sentence in 4 the Results of the Abstract says; however, I 5 cannot find in this paper how many 6 clear-cells they actually had to look at to 7 know if there were enough to find statistical 8 significance or not. 9 They only mentioned that they 10 were in three studies, but I don't see 11 anywhere in the paper, in the results, how 12 many clear-cell cases there were in these 13 three studies. 14 Q. What methodology are you using 15 to value Terry differently than Penninkilampi 16 with respect to finding an association 17 between clear-cell ovarian cancer and talcum 18 powder use? 19 DR. THOMPSON: Object to form. 20 A. The difference is I know how 21 many clear-cell cases there were in the Terry 22 study. I can't tell that from the 23 Penninkilampi study. Unless we looked at the 24 three studies that he found clear-cell 25 separated out, and we could add those up and</p>	<p style="text-align: right;">Page 493</p> <p>1 DR. THOMPSON: Object to form. 2 A. They all had small numbers of 3 clear-cell ovarian cancers, and I would not 4 expect them to find an association with such 5 small numbers. 6 BY MR. ZELLERS: 7 Q. Are you aware that these are 8 the only talc epidemiology studies that break 9 out data by clear-cell subtype? 10 DR. THOMPSON: Object to form. 11 A. I know that only some of them 12 did. 13 BY MR. ZELLERS: 14 Q. And you attribute it to low 15 numbers, but you do agree that in none of 16 these studies was an association with 17 clear-cell ovarian cancer found, correct? 18 DR. THOMPSON: Object to form. 19 A. When the numbers are low, it's 20 hard to find an association because you can't 21 make a determination with small numbers. 22 BY MR. ZELLERS: 23 Q. Except for O'Brien and Taher, 24 all of these studies were published before 25 your January 2019 deposition, your MDL</p>

17 (Pages 490 to 493)

Judith Wolf, M.D.

<p style="text-align: right;">Page 494</p> <p>1 deposition; is that right?</p> <p>2 A. Yes.</p> <p>3 You're talking about the ones</p> <p>4 you just listed?</p> <p>5 Q. Yes.</p> <p>6 A. Yes.</p> <p>7 Q. You testified at your</p> <p>8 January 7th, 2019 deposition that the other</p> <p>9 subtypes are usually so small that there's</p> <p>10 probably enough to know statistical</p> <p>11 significance, such as clear-cell or mucinous.</p> <p>12 And I think that was a typo or that you</p> <p>13 misspoke.</p> <p>14 I'm assuming that what you</p> <p>15 meant to say -- and I'm happy to show you the</p> <p>16 testimony.</p> <p>17 With that background, I'm going</p> <p>18 to ask you a new question.</p> <p>19 Do you agree that the other</p> <p>20 subtypes, such as clear-cell or mucinous</p> <p>21 ovarian cancer, are usually so small that</p> <p>22 there's probably not enough to know</p> <p>23 statistical significance?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. The numbers of cases of those</p>	<p style="text-align: right;">Page 496</p> <p>1 MR. ZELLERS: I'm marking as</p> <p>2 Exhibit 46 one page of your MDL</p> <p>3 testimony, page 241, from January of</p> <p>4 2019.</p> <p>5 (Whereupon, Deposition Exhibit</p> <p>6 Wolf-46, Excerpt from Wolf MDL</p> <p>7 Deposition, was marked for</p> <p>8 identification.)</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. So you see you were asked the</p> <p>11 question: Is it your opinion, Doctor, that</p> <p>12 talcum powder use peritoneally increases a</p> <p>13 woman's risk of all different histologic</p> <p>14 types of ovarian cancer?</p> <p>15 And I'm going down partway</p> <p>16 through your answer, starting at line 15:</p> <p>17 And the other subtypes are usually so small</p> <p>18 that there's probably enough to know</p> <p>19 statistical significance, such as clear-cell</p> <p>20 or mucinous.</p> <p>21 And I believe what you meant to</p> <p>22 say is that: And the other subtypes are</p> <p>23 usually so small that there's probably not</p> <p>24 enough to know statistical significance, such</p> <p>25 as clear-cell or mucinous.</p>
<p style="text-align: right;">Page 495</p> <p>1 small types, and I think that's what I've</p> <p>2 been saying all morning.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. Yes, I believe that you have,</p> <p>5 and I believe that there was an error or that</p> <p>6 you misspoke in your original deposition, and</p> <p>7 I think we've now clarified it.</p> <p>8 Because you do agree that</p> <p>9 because, in your view of the small number of</p> <p>10 cases, that there are not studies that show a</p> <p>11 statistically significant association for</p> <p>12 clear-cell and for mucinous, other than the</p> <p>13 Terry study that we've talked about as it</p> <p>14 relates to clear-cell ovarian cancer,</p> <p>15 correct?</p> <p>16 DR. THOMPSON: Object to form,</p> <p>17 misstates her testimony.</p> <p>18 A. So are you -- can you read me</p> <p>19 what my deposition said? Because I'm very</p> <p>20 confused by that question.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. I don't think we have to take</p> <p>23 the time to clear it up, but I will do it</p> <p>24 just so that we're sure we understand your</p> <p>25 testimony.</p>	<p style="text-align: right;">Page 497</p> <p>1 Is that correct?</p> <p>2 A. So I'm going to say either</p> <p>3 that's what I meant to say or this is another</p> <p>4 mistake, because there's a mistake earlier in</p> <p>5 that answer. It says stromal cells or dermal</p> <p>6 cells, and I would never say dermal cells.</p> <p>7 It was germ cells. So either the reporter</p> <p>8 got it wrong or I misspoke.</p> <p>9 Q. Yes. Either way, we now have</p> <p>10 it corrected. Thank you.</p> <p>11 A. Thank you.</p> <p>12 Q. Are you familiar with the</p> <p>13 Wentzensen 2021 article that's another</p> <p>14 O'Brien article with a coauthor?</p> <p>15 A. Is that a recent one, just came</p> <p>16 out in the last month or so?</p> <p>17 Q. Yes.</p> <p>18 A. Yes.</p> <p>19 Q. Let me show that to you.</p> <p>20 MR. ZELLERS: We'll mark that</p> <p>21 article as Deposition Exhibit 47.</p> <p>22 (Whereupon, Deposition Exhibit</p> <p>23 Wolf-47, Talc, Body Powder and Ovarian</p> <p>24 Cancer... by Wentzensen et al, was</p> <p>25 marked for identification.)</p>

18 (Pages 494 to 497)

Judith Wolf, M.D.

<p style="text-align: right;">Page 498</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. And you're familiar with this</p> <p>3 article that came out recently, 2021,</p> <p>4 correct?</p> <p>5 A. Yes.</p> <p>6 Q. The authors discuss the</p> <p>7 epidemiology regarding the different</p> <p>8 histologic subtypes of ovarian cancer,</p> <p>9 correct?</p> <p>10 A. As that result -- as that</p> <p>11 confers with the previous O'Brien study, the</p> <p>12 ones that they looked at in the previous</p> <p>13 O'Brien study, yes.</p> <p>14 Q. If you go to page 7, left-hand</p> <p>15 column.</p> <p>16 A. Okay.</p> <p>17 Q. It starts: Overall, these</p> <p>18 results consistently demonstrate that there</p> <p>19 is a positive association between talc use</p> <p>20 and serous ovarian cancers and possibly also</p> <p>21 endometrioid tumors.</p> <p>22 Is that right?</p> <p>23 A. That's what the sentence says,</p> <p>24 yes.</p> <p>25 Q. Then they continue: The</p>	<p style="text-align: right;">Page 500</p> <p>1 association.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. So in your view, we would need</p> <p>4 more cases; and if we had more cases --</p> <p>5 A. Then we could --</p> <p>6 Q. -- that would either give us</p> <p>7 evidence of an association or not of an</p> <p>8 association.</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 A. Well, in the study with the</p> <p>11 most cases, there is an association.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. Can you answer my question?</p> <p>14 DR. THOMPSON: Actually, I</p> <p>15 don't think there was a question, but</p> <p>16 you can ask it again.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. If we had more cases, then that</p> <p>19 would help us to understand whether there's a</p> <p>20 true etiologic difference or that there is an</p> <p>21 association, correct?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. In this study that does have</p> <p>24 more cases, there is an association.</p> <p>25 ///</p>
<p style="text-align: right;">Page 499</p> <p>1 relationship between talc use and the rarer</p> <p>2 mucinous or clear-cell tumor histotypes is</p> <p>3 more ambiguous, although it is not clear</p> <p>4 whether this is due to true etiologic</p> <p>5 differences or because their rarity makes</p> <p>6 them difficult to study.</p> <p>7 Is that what the authors state?</p> <p>8 A. That's what the authors state,</p> <p>9 which -- the rarity is what I've been talking</p> <p>10 about all morning long.</p> <p>11 Q. You agree with that statement</p> <p>12 by these authors, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. I agree that the rarity is</p> <p>15 probably -- is a likely reason why we can't</p> <p>16 see if there's any difference with the</p> <p>17 different subtypes that are rare.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. It's also possible that it's</p> <p>20 due to true etiologic differences, correct?</p> <p>21 That's a possibility?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. It's hard to answer that</p> <p>24 question when we don't have enough cases in</p> <p>25 most of the studies to know if there's an</p>	<p style="text-align: right;">Page 501</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Well, I understand that. At</p> <p>3 least these authors, the O'Brien authors,</p> <p>4 based upon their review and their study, say</p> <p>5 it's not clear -- well, they say that there</p> <p>6 is not a demonstrated association with</p> <p>7 mucinous or clear-cell tumor histotypes and</p> <p>8 that it's not clear whether this is due to</p> <p>9 true etiologic differences or because their</p> <p>10 rarity makes them more difficult to study.</p> <p>11 That's what these authors</p> <p>12 concluded in their recent study, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. The authors state the</p> <p>15 relationship between talc use and rarer</p> <p>16 mucinous and clear-cell subtypes is more</p> <p>17 ambiguous. Yes, that's what it says.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. All right. Do you agree that</p> <p>20 within the last five years, we have a better</p> <p>21 understanding of how different the five main</p> <p>22 histologic subtypes of epithelial ovarian</p> <p>23 cancer are?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. We have a better idea -- the</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 502</p> <p>1 first part of the question was?</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. Sure.</p> <p>4 Over the last five years, we</p> <p>5 now -- you know, medical professionals,</p> <p>6 science professionals, have a better</p> <p>7 understanding that the five main histologic</p> <p>8 subtypes of epithelial ovarian cancer are</p> <p>9 different, correct?</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 A. We have a better understanding</p> <p>12 of molecular changes that are associated with</p> <p>13 different subtypes of epithelial ovarian</p> <p>14 cancer, and five -- I'm assuming the five</p> <p>15 main subtypes that you're referring to would</p> <p>16 be low-grade serous, high-grade serous,</p> <p>17 endometrioid, clear-cell and mucinous? Is</p> <p>18 that what you're referring to?</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. Yes.</p> <p>21 A. Okay. I believe we understand</p> <p>22 more of the molecular pathways, the molecular</p> <p>23 abnormalities in the different subtypes.</p> <p>24 Q. For example, the genetic</p> <p>25 mutations that are associated with high-grade</p>	<p style="text-align: right;">Page 504</p> <p>1 associated with high-grade serous carcinoma</p> <p>2 are different than the genetic mutations that</p> <p>3 are associated, for example, with clear-cell</p> <p>4 ovarian cancer, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. The common genetic mutations,</p> <p>7 the most common genetic mutations that are</p> <p>8 found in serous cancers versus mucinous</p> <p>9 versus clear-cell, high-grade or low-grade</p> <p>10 serous, are different.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. All right. You're familiar</p> <p>13 with the concept generally that science has</p> <p>14 now discovered different genes become mutated</p> <p>15 in different histologic subtypes, correct?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. Again, the common genes that</p> <p>18 are mutated in high-grade serous are</p> <p>19 different than the genes that are commonly</p> <p>20 mutated in low-grade serous and the other</p> <p>21 subtypes.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. And that helps doctors be able</p> <p>24 to better treat some of the different</p> <p>25 histologic subtypes, correct?</p>
<p style="text-align: right;">Page 503</p> <p>1 serous carcinoma are different than the</p> <p>2 genetic mutations that are associated with,</p> <p>3 for example, clear-cell ovarian cancer,</p> <p>4 correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. The most common genetic</p> <p>7 mutations are different in the different</p> <p>8 subtypes, but if you look at an individual</p> <p>9 patient, the genetic mutations in every</p> <p>10 serous -- every high-grade serous are</p> <p>11 different.</p> <p>12 That statement refers to --</p> <p>13 could refer to the common genetic mutations</p> <p>14 that are found in the different subtypes.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. With that qualification and</p> <p>17 explanation, you agree with my question,</p> <p>18 correct?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. No. I think that your question</p> <p>21 was broad and my answer was specific.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. All right. Let me ask it</p> <p>24 again, then.</p> <p>25 Genetic mutations that are</p>	<p style="text-align: right;">Page 505</p> <p>1 A. Unfortunately, in ovarian</p> <p>2 cancer, it hasn't yet made a difference in</p> <p>3 how we treat patients.</p> <p>4 Q. So you treat all of the</p> <p>5 different subtypes of ovarian cancer the</p> <p>6 same; is that your testimony?</p> <p>7 MS. GARBER: Object to the</p> <p>8 form.</p> <p>9 A. No. No, the -- for mucinous</p> <p>10 tumors, we treat them more like GI tumors.</p> <p>11 For low-grade serous, we sometimes use</p> <p>12 different treatments. But for the common</p> <p>13 high-grade lesions, serous, endometrioid,</p> <p>14 clear-cell, we treat them the same.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. Environmental carcinogens, like</p> <p>17 smoking or asbestos, they do not induce all</p> <p>18 of these different genetic mutations; is that</p> <p>19 right? I mean, they, by and large, induce</p> <p>20 one type of genetic mutation, correct?</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. Are you saying that smoking</p> <p>23 only induces one type of genetic mutation?</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. I'm asking you if that is</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 506</p> <p>1 something you are knowledgeable about or not.</p> <p>2 DR. THOMPSON: Object to form.</p> <p>3 A. I'm going to say I'm not</p> <p>4 entirely knowledgeable about all the genetic</p> <p>5 mutations that smoking can cause, but I'm not</p> <p>6 aware that there's a single one.</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. Do you agree that talc does not</p> <p>9 cause mucinous ovarian cancer?</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 MS. GARBER: Object to the</p> <p>12 form.</p> <p>13 A. Mucinous ovarian cancer is one</p> <p>14 of those rare cancers that I don't know that</p> <p>15 there's enough in any one study to show a</p> <p>16 statistical significant difference or not.</p> <p>17 Again, not that many studies</p> <p>18 separate out the subtypes, so I don't know</p> <p>19 that there's enough information. There's</p> <p>20 certainly not enough information to say it</p> <p>21 does not cause mucinous cancer.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. When you reviewed</p> <p>24 Dr. Clarke-Pearson's deposition in</p> <p>25 preparation for your deposition, did you see</p>	<p style="text-align: right;">Page 508</p> <p>1 MS. GARBER: Join.</p> <p>2 A. So I'm going to state what I</p> <p>3 stated before: I don't know that there's</p> <p>4 enough cases of mucinous separated out, and I</p> <p>5 would -- to say that.</p> <p>6 DR. THOMPSON: Let us know when</p> <p>7 it's a good time for a break in the</p> <p>8 next new minutes.</p> <p>9 MR. ZELLERS: You guys can take</p> <p>10 a break right now, if you'd like.</p> <p>11 THE WITNESS: Can I say, are we</p> <p>12 almost done with this case or do you</p> <p>13 have quite a bit more with this first</p> <p>14 case?</p> <p>15 MR. ZELLERS: I have quite a</p> <p>16 bit more on this first case.</p> <p>17 THE WITNESS: Okay.</p> <p>18 MR. ZELLERS: Off the record.</p> <p>19 (Recess taken, 10:13 a.m. to</p> <p>20 10:24 a.m. CDT)</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Dr. Wolf, do you agree that</p> <p>23 Bradford Hill does not apply to specific</p> <p>24 causation?</p> <p>25 DR. THOMPSON: Object to form.</p>
<p style="text-align: right;">Page 507</p> <p>1 that he testified that talc does not cause</p> <p>2 mucinous ovarian cancer?</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 MS. GARBER: Object to the</p> <p>5 form, misstates his testimony.</p> <p>6 A. I don't recall what his</p> <p>7 testimony said about mucinous cancers.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. I'm going to quote this and you</p> <p>10 can -- I'm going to ask a question at the end</p> <p>11 whether you agree or disagree.</p> <p>12 MR. ZELLERS: Counsel, you can</p> <p>13 object if you need to.</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. I'm reading from</p> <p>16 Dr. Clarke-Pearson's deposition, page 699,</p> <p>17 line 15.</p> <p>18 QUESTION: So if I understand</p> <p>19 you, talcum powder causes all epithelial</p> <p>20 ovarian cancers except mucinous; is that</p> <p>21 right?</p> <p>22 ANSWER: Yes, that's correct.</p> <p>23 Do you agree with that answer?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 That's not the complete testimony.</p>	<p style="text-align: right;">Page 509</p> <p>1 A. Bradford Hill looks at</p> <p>2 causation. Are you asking does it -- what do</p> <p>3 you mean, specific causation?</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. So specific causation would be</p> <p>6 whether, in an individual case, talcum powder</p> <p>7 caused ovarian cancer. So let me ask this.</p> <p>8 Do you agree that the Bradford</p> <p>9 Hill criteria cannot be applied to determine</p> <p>10 whether talc caused an individual woman's</p> <p>11 ovarian cancer?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. So when I'm looking at cause of</p> <p>14 an individual woman's cancer, such as</p> <p>15 Ms. Bondurant, I look at all of the risk</p> <p>16 factors and all of the protective factors,</p> <p>17 everything in the patient's history and</p> <p>18 pathology, whatever I have to review.</p> <p>19 I don't believe I call that a</p> <p>20 Bradford Hill. I would call that a</p> <p>21 differential diagnosis, review of the</p> <p>22 evidence, evidence -- whatever evidence there</p> <p>23 is.</p> <p>24 But I'm going to say on a</p> <p>25 day-to-day basis, when I take care of</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 510</p> <p>1 patients, I don't consider each individual</p> <p>2 patient a Bradford Hill. It's a similar</p> <p>3 process, but that's not what I would call it.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. In Ms. Bondurant's case, what</p> <p>6 was your methodology for determining that</p> <p>7 talcum powder was a substantial contributing</p> <p>8 cause of her clear-cell ovarian cancer?</p> <p>9 A. So reviewing everything that I</p> <p>10 had to review from her, which was medical</p> <p>11 records, the PPF -- I think it's called a</p> <p>12 PPF -- her daughter's deposition, all the</p> <p>13 things that I had to review, and knowing what</p> <p>14 the risk factors for ovarian cancer are and</p> <p>15 protective factors are, evaluating those in</p> <p>16 her case.</p> <p>17 Q. Have you reviewed any published</p> <p>18 medical literature that provides you with a</p> <p>19 methodology to determine the specific cause</p> <p>20 of an individual woman's ovarian cancer?</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. So just the tenets of</p> <p>23 evidence-based medicine, which I think are</p> <p>24 reviewed -- I looked at before my deposition,</p> <p>25 reviewing to -- my old deposition, and up to</p>	<p style="text-align: right;">Page 512</p> <p>1 DR. THOMPSON: Object to form.</p> <p>2 A. All the possibilities, yes.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. Isn't the critical component of</p> <p>5 a differential diagnosis the search for a</p> <p>6 diagnosis?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. So the goal in trying to find a</p> <p>9 diagnosis is, yes, to find out what the</p> <p>10 diagnosis is, and the goal of finding out a</p> <p>11 cause would be to see what the risk factors</p> <p>12 are, to see what's the most likely cause or</p> <p>13 causes.</p> <p>14 In a disease like ovarian</p> <p>15 cancer, it's multifactorial, so there may be</p> <p>16 multiple risk factors.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. The signs and symptoms of</p> <p>19 ovarian cancer include abdominal distension,</p> <p>20 bloating, pelvic pressure, generalized</p> <p>21 wasting of extremities; is that right?</p> <p>22 A. So abdominal bloating, pelvic</p> <p>23 pain/pressure, early satiety, low back pain,</p> <p>24 fatigue, changes in bowel or bladder</p> <p>25 function. I wouldn't list wasting of the</p>
<p style="text-align: right;">Page 511</p> <p>1 date, just to get a definition of what I do</p> <p>2 every day. I don't generally look that up</p> <p>3 because it's just something that sort of</p> <p>4 comes natural after 30 years.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. You conducted a differential</p> <p>7 diagnosis based on a series of questions; is</p> <p>8 that right?</p> <p>9 A. Yes.</p> <p>10 Q. And you're the one that came up</p> <p>11 with those questions, correct?</p> <p>12 A. Yes.</p> <p>13 Q. Do you agree that a</p> <p>14 differential diagnosis is a list of possible</p> <p>15 diseases that could be causing a patient's</p> <p>16 symptoms?</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. That could be one way of</p> <p>19 looking at a differential diagnosis, or a</p> <p>20 list of different risk factors that could be</p> <p>21 causing a patient's illness.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. To perform a differential</p> <p>24 diagnosis, you have to consider competing</p> <p>25 diagnoses; is that right?</p>	<p style="text-align: right;">Page 513</p> <p>1 extremities as a common symptom for women</p> <p>2 with ovarian cancer.</p> <p>3 Q. Those signs and symptoms, and</p> <p>4 in your differential, the competing diagnoses</p> <p>5 would be bowel obstruction, fibroids,</p> <p>6 cirrhosis and ovarian cancer; is that right</p> <p>7 here?</p> <p>8 DR. THOMPSON: Object to form.</p> <p>9 A. The challenge with the symptoms</p> <p>10 of ovarian cancer is they are quite vague, so</p> <p>11 it could be as simple as IBS and as</p> <p>12 complicated as colon cancer, a bladder</p> <p>13 infection. Multiple things can cause the</p> <p>14 same symptoms. That's why it's a challenge</p> <p>15 to find ovarian cancer because the symptoms</p> <p>16 are so nonspecific.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. There's no issue with the</p> <p>19 diagnosis in Ms. Bondurant's case, though?</p> <p>20 You agree that she was correctly diagnosed</p> <p>21 with clear-cell ovarian cancer; is that</p> <p>22 right?</p> <p>23 A. Yes.</p> <p>24 Q. When you practiced as a</p> <p>25 clinician, you wouldn't use a differential</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 514</p> <p>1 diagnosis to identify the cause of any 2 woman's ovarian cancer; is that right? 3 DR. THOMPSON: Object to form. 4 MS. GARBER: Object to the 5 form. 6 A. I would use a differential -- I 7 don't know what else to call it other than a 8 differential diagnosis. 9 BY MR. ZELLERS: 10 Q. As I understand your 11 methodology for determining that talc was the 12 specific cause of Ms. Bondurant's ovarian 13 cancer, what you did is you looked at her 14 other potential risk factors and her talc 15 use; is that right? 16 DR. THOMPSON: Object to form. 17 A. I looked at all the medical 18 records that I had available for her, which 19 included her medical history, her risk 20 factors. I looked at the deposition of her 21 daughter, the PPF, everything that I had 22 available to review to assess. 23 BY MR. ZELLERS: 24 Q. You did not need, in this case 25 or in any of the cases, a report from</p>	<p style="text-align: right;">Page 516</p> <p>1 Q. All right. You testified to 2 the jury in the Kleiner case that ovarian 3 cancer is multifactorial, correct? 4 A. Yes. 5 Q. And you've testified to that in 6 this deposition; is that right? 7 A. Yes. 8 Q. In Kleiner, you told the jury 9 that a cell is like a Jenga game. You pull 10 out a block -- you pull a block out until the 11 tower falls. 12 So talc could be an 13 environmental factor that can pull a block 14 out. BRCA could be a factor that pulls out 15 another block, until the whole thing falls 16 down. 17 Is that the analogy? 18 A. Yeah, I was trying to come up 19 with something that -- visual that people 20 could understand the concept of a 21 multifactorial disease. 22 Q. You agree that science doesn't 23 really know what causes ovarian cancer, with 24 the exceptions that we talked about 25 yesterday? The genetic mutations that I</p>
<p style="text-align: right;">Page 515</p> <p>1 Dr. Godleski either finding or not finding 2 particles, correct? 3 DR. THOMPSON: Object to form. 4 A. In Ms. Bondurant's case, I have 5 not yet seen a report of -- from 6 Dr. Godleski, but as I stated in my report, 7 if there are particles or fibers in her 8 tissue, it would support causation, but I 9 don't think it's a requirement. 10 BY MR. ZELLERS: 11 Q. The absence of a finding of 12 talc fibers or particles by Dr. Godleski in 13 this or in any case does not negate or change 14 an opinion that you formed as to causation 15 between talc use and a particular woman's 16 ovarian cancer? 17 A. If the rest of the history of 18 talc usage supported talc, it would not, 19 because Dr. Godleski gets a few blocks from a 20 small amount of the tissue that's removed and 21 never has access to all of the tissue. 22 So the fact that the few blocks 23 that he sees and can analyze doesn't show 24 talc particles or fibers doesn't mean there 25 aren't any there.</p>	<p style="text-align: right;">Page 517</p> <p>1 believe we agreed were 10 to 15% of the cases 2 of ovarian cancer, talc, which at least 3 Dr. Cramer ascribes 10% of the cases. 4 But other than that, we really 5 don't know what causes ovarian cancer; is 6 that right? 7 DR. THOMPSON: Object to form. 8 A. So ovarian cancer, like all 9 cancers, is caused by a series of genetic 10 mutations. In some cases in ovarian cancer, 11 we know what those mutations are because it's 12 something that the patient inherited. In 13 many cases, we don't know where those 14 mutations came from. 15 And Dr. Cramer's paper actually 16 said that 10% of ovarian cancers could be 17 prevented if talc use was eliminated, not 18 that it caused 10% of ovarian cancer cases. 19 So we definitely know that 20 ovarian cancer is caused by a series of 21 genetic mutations. In some cases, we know 22 what caused them; and in some cases, we 23 don't. 24 BY MR. ZELLERS: 25 Q. If there's a substantial number</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 518</p> <p>1 of cases where we don't know the cause of a 2 woman's ovarian cancer -- and let me back up. 3 We agreed, I think, yesterday 4 that a woman can have -- you know, be tested 5 positive for BRCA, but BRCA may not cause her 6 ovarian cancer, correct? 7 A. Yes. A mutation of BRCA. 8 Q. A mutation in BRCA. 9 A woman may use talc or be 10 exposed to talc, but it's possible that talc 11 does not cause her ovarian cancer, correct? 12 A. It's possible that she uses 13 talc and does not get ovarian cancer. 14 Q. So given that, how, in any 15 individual woman, can you ever determine the 16 actual cause of her ovarian cancer? 17 DR. THOMPSON: Object to form. 18 A. Given what? 19 BY MR. ZELLERS: 20 Q. Well, a woman can have a risk 21 factor for ovarian cancer and get ovarian 22 cancer from something totally different, 23 correct? 24 DR. THOMPSON: Object to form. 25 A. Well, I think -- I thought what</p>	<p style="text-align: right;">Page 520</p> <p>1 DR. THOMPSON: I don't care if 2 she answers it, but generally you wait 3 for an answer before you ask another 4 question. I'm just saying. 5 MR. ZELLERS: Okay. Is it okay 6 if we continue? I mean, the witness 7 and I, I think, are doing okay. 8 DR. THOMPSON: You don't need 9 my permission to continue. 10 MR. ZELLERS: Okay. 11 BY MR. ZELLERS: 12 Q. So, Doctor, I guess let's go 13 back and try to start over here. 14 We talked yesterday that a 15 woman -- a hypothetical woman may have five 16 different risk factors for ovarian cancer and 17 that we don't know specifically which of 18 those risk factors, or if any of those risk 19 factors, actually caused her ovarian cancer. 20 Is that -- that hypothetical 21 is -- can be accurate, correct? 22 DR. THOMPSON: Object to form. 23 MS. GARBER: Object to the 24 form. 25 A. So are you asking me about a</p>
<p style="text-align: right;">Page 519</p> <p>1 we were talking about is that a woman can 2 have a risk factor for ovarian cancer and not 3 get ovarian cancer, but if she has that risk 4 factor and she gets ovarian cancer, I would 5 generally attribute that risk factor as part 6 of the reason that she got -- a cause of her 7 cancer. 8 BY MR. ZELLERS: 9 Q. But we don't know that's true 10 in any individual woman's case; is that 11 right? 12 DR. THOMPSON: Object to form. 13 BY MR. ZELLERS: 14 Q. I mean, a woman may have -- and 15 this may go back to the -- 16 DR. THOMPSON: Did you want her 17 to answer that question or not? 18 Well, you went immediately into 19 another question before she answered 20 your first one. But if you don't want 21 her to answer, that's fine. 22 BY MR. ZELLERS: 23 Q. Is there a question that you 24 feel is pending you need to answer, Doctor? 25 I don't want to stop you --</p>	<p style="text-align: right;">Page 521</p> <p>1 hypothetical? I'm not sure what your 2 question is. 3 BY MR. ZELLERS: 4 Q. Yeah. Let's talk about a 5 hypothetical here. 6 A. Yes. 7 Q. So we have a woman who has 8 hormone replacement therapy, who has age, who 9 has obesity. 10 What are a couple of other risk 11 factors for ovarian cancer that we'll put in 12 our hypothetical? 13 A. Well, we can give her 14 endometriosis and make her infertile. How 15 about that? 16 Q. Hormone replacement therapy, 17 age, obesity, endometriosis? 18 A. Infertility. 19 Q. Infertility. 20 If this hypothetical woman with 21 these risk factors develops ovarian cancer, 22 it's impossible to say what the cause of her 23 ovarian cancer is, correct? 24 DR. THOMPSON: Object to form. 25 A. I would say that each of those</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 522</p> <p>1 things can be a cause of her ovarian cancer.  2 BY MR. ZELLERS:  3 Q. They can be. It's possible.  4 But we can't say to a probability which, if  5 any, of those things caused her ovarian  6 cancer, correct?  7 DR. THOMPSON: Object to form.  8 MS. GARBER: Object to the  9 form.  10 A. It would be my assumption that  11 it was all of those things were a cause of  12 her ovarian cancer.  13 BY MR. ZELLERS:  14 Q. So your methodology and the way  15 you approach these cases is that if a woman  16 has a risk factor for ovarian cancer, you  17 assume that those risk factors actually are  18 contributing causes; is that right?  19 A. I assume that they may be a  20 contributing cause.  21 Q. And that's your methodology  22 with respect to talc use? If a woman has a  23 history of talcum powder use, just as you  24 assume that family history, hormone  25 replacement therapy, age, obesity would be</p>	<p style="text-align: right;">Page 524</p> <p>1 You agree with that, right?  2 A. Yes.  3 Q. Let's take BRCA as an example.  4 We know the science on the percentage by  5 which a woman's risk of ovarian cancer is  6 increased if she's BRCA positive, correct?  7 A. Yes.  8 DR. THOMPSON: Object to form.  9 BY MR. ZELLERS:  10 Q. In your report, page 4, you  11 state that if you're BRCA1 -- if a patient is  12 BRCA1, you have a 39 to 40% lifetime risk of  13 developing ovarian cancer, correct?  14 A. Yes.  15 Q. If you have BRCA2, you have an  16 11 to 27% increased lifetime risk of ovarian  17 cancer; is that right?  18 A. Yes.  19 DR. THOMPSON: Object to form,  20 just by leaving out the gene mutation  21 when you say BRCA1 and BRCA2.  22 MR. ZELLERS: I'm trying to  23 read from the doctor's report.  24 BY MR. ZELLERS:  25 Q. Am I reading this inaccurately,</p>
<p style="text-align: right;">Page 523</p> <p>1 contributing causes to her ovarian cancer, if  2 she has talc use, you believe that's a  3 contributing cause as well, fair?  4 DR. THOMPSON: Object to form.  5 A. If, in reviewing the whole  6 thing, she -- there was adequate evidence  7 that she had talc use, I would consider that  8 a cause of her cancer.  9 BY MR. ZELLERS:  10 Q. If she has a family history, if  11 she has hormone replacement therapy, if she  12 has age, if she has obesity that rise to the  13 level of risk factors, you would also say  14 those are contributing causes to her ovarian  15 cancer, correct?  16 DR. THOMPSON: Object to form.  17 A. Again, ovarian cancer is  18 multifactorial, so all of those things could  19 be a cause of her cancer.  20 BY MR. ZELLERS:  21 Q. In your report, you state: Not  22 everyone who has an inherited BRCA mutation  23 gets ovarian cancer and not everyone who gets  24 ovarian cancer has an inherited BRCA  25 mutation.</p>	<p style="text-align: right;">Page 525</p> <p>1 Doctor?  2 DR. THOMPSON: Yes.  3 A. Yes. It says BRCA1 gene  4 mutation.  5 BY MR. ZELLERS:  6 Q. So you would like me to amend  7 my statement.  8 If you're a BRCA1 gene  9 mutation, you have a 39 to 46% lifetime risk  10 of developing ovarian cancer, correct?  11 A. If a woman has, not -- you  12 aren't that mutation. If you have the  13 mutation.  14 Q. All right. And if a woman has  15 a BRCA2 gene mutation, she would have an 11  16 to 27% increased lifetime risk of ovarian  17 cancer; is that right?  18 A. She would have an 11 to 27%  19 lifetime risk of developing ovarian cancer,  20 not increased lifetime risk, but a lifetime  21 risk.  22 Q. So if we have a woman who is  23 BRCA-positive, she's at a 40% lifetime risk  24 of ovarian cancer, and you consider BRCA to  25 be a cause of her ovarian cancer; is that</p>

25 (Pages 522 to 525)

Judith Wolf, M.D.

<p style="text-align: right;">Page 526</p> <p>1 right?</p> <p>2 A. Yes. If she has ovarian</p> <p>3 cancer, yes.</p> <p>4 Q. Is it your opinion that any</p> <p>5 individual woman who is BRCA-positive and who</p> <p>6 gets ovarian cancer, that you don't think the</p> <p>7 BRCA mutation alone could have caused her</p> <p>8 ovarian cancer?</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Is that your testimony and</p> <p>12 opinion?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. The inherited gene mutation in</p> <p>15 one allele of the BRCA gene alone does not</p> <p>16 cause cancer.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. There has to be something else</p> <p>19 to cause the cancer, ovarian cancer, in this</p> <p>20 case, in your opinion; is that right?</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. Yes, that is correct.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. If we go back to your analogy</p> <p>25 that you used in the Kleiner trial, BRCA gene</p>	<p style="text-align: right;">Page 528</p> <p>1 There needs to be something more?</p> <p>2 A. Yes.</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 A. That is true.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Talc -- are you of the view</p> <p>7 that talc increases a woman's risk of ovarian</p> <p>8 cancer by 20 to 30%?</p> <p>9 A. 20 to 40%.</p> <p>10 Q. And you consider talcum powder</p> <p>11 use to be a cause of ovarian cancer, correct?</p> <p>12 A. Yes.</p> <p>13 Q. Similar to BRCA, it's your</p> <p>14 opinion that talc alone is not sufficient to</p> <p>15 cause an individual woman's ovarian cancer,</p> <p>16 correct?</p> <p>17 A. Any risk factor alone that</p> <p>18 causes only one hit to the cell would not</p> <p>19 cause ovarian cancer. My concern about talc</p> <p>20 is that continued use, long-term use could</p> <p>21 cause more than one injury to the cell.</p> <p>22 The BRCA mutation doesn't</p> <p>23 change over a woman's lifetime; it's that one</p> <p>24 mutation. But if you have a continuing</p> <p>25 injury, then you could have more than one.</p>
<p style="text-align: right;">Page 527</p> <p>1 mutation is just one of the Jenga pieces,</p> <p>2 fair?</p> <p>3 A. Yeah, one hit, one injury to</p> <p>4 the cell.</p> <p>5 Q. And we talked yesterday that</p> <p>6 you believe, and I think we looked at</p> <p>7 Dr. Clarke-Pearson, that it takes at least 10</p> <p>8 to 15 injuries or mutations to the cell?</p> <p>9 A. The literature supports 5 to</p> <p>10 10.</p> <p>11 Q. Does that mean that if a woman</p> <p>12 is -- strike that.</p> <p>13 Does that mean that if a woman</p> <p>14 does have a BRCA gene mutation, that that</p> <p>15 increase in risk is not high enough to say</p> <p>16 that BRCA alone caused the woman's ovarian</p> <p>17 cancer?</p> <p>18 DR. THOMPSON: Object to form.</p> <p>19 A. I do not understand that</p> <p>20 question.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. So whether it's a BRCA1 gene</p> <p>23 mutation or a BRCA2 gene mutation, that in</p> <p>24 and of itself, in your opinion, does not</p> <p>25 cause a woman's cancer, ovarian cancer.</p>	<p style="text-align: right;">Page 529</p> <p>1 Q. Generally, is it your opinion</p> <p>2 that in order for ovarian cancer to be</p> <p>3 caused, it takes more than talcum powder use?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. It takes more than one gene</p> <p>6 mutation for a normal cell to become a</p> <p>7 cancerous cell. My opinion is that talc use</p> <p>8 could cause one, it could cause two, it could</p> <p>9 cause more injuries to the cell, and that's</p> <p>10 going to vary from patient to patient based</p> <p>11 on her underlying physiology and any other</p> <p>12 risk factors that she may or may not have.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. So in your opinion, in some</p> <p>15 cases, talc use alone may not be sufficient</p> <p>16 to cause an individual woman's ovarian</p> <p>17 cancer; it may require other things, other</p> <p>18 risk factors?</p> <p>19 A. That is not what I said.</p> <p>20 MS. GARBER: That's not what</p> <p>21 she said at all.</p> <p>22 MR. ZELLERS: Ms. Garber,</p> <p>23 please. You can object to form --</p> <p>24 MS. GARBER: Okay. Object to</p> <p>25 form.</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 530</p> <p>1 MR. ZELLERS: -- but don't be 2 making comments and shouting out. 3 Okay. 4 MS. GARBER: Just a total 5 misrepresentation of what she said. I 6 just blurted it out. I apologize. 7 DR. THOMPSON: But you weren't 8 loud, comparatively speaking. 9 BY MR. ZELLERS: 10 Q. BRCA. 11 A. BRCA. 12 Q. Gene mutation. 13 A. Yes. 14 Q. And we know that it increases 15 or causes results in a lifetime risk -- 16 increased risk of -- depending upon the 17 mutation, of between 11% and 46%, correct? 18 A. So what that means is that if 19 you have a BRCA1 mutation, by the time you're 20 at age 70, there's around a 40% chance you 21 could have ovarian cancer. 22 If you have a BRCA2 mutation, 23 by the time you get to age 70, there's an 11 24 to 27%. 25 I just picked the middle number</p>	<p style="text-align: right;">Page 532</p> <p>1 need to cause either 5 to 10 hits to the cell 2 or 10 to 15, depending upon how many genetic 3 hits are required to the cells to cause 4 ovarian cancer. 5 Is that your opinion? 6 DR. THOMPSON: Object to form. 7 A. Whatever causes the cancer, 8 there has to be 5 to 10 injuries to the cell 9 that result in genetic changes in the cell 10 that can cause -- that cause cancer. 11 BY MR. ZELLERS: 12 Q. Those hits or injuries to the 13 cell could come from talcum powder use, they 14 could come from BRCA gene mutations, they 15 could come from hormone replacement therapy, 16 family history, age, obesity, correct? 17 A. So we know that BRCA mutations 18 is one of -- would be one of those hits, 19 right? Family history could indicate that 20 there's some genetic underlying hit. 21 Endometriosis, like talc, from inflammatory 22 changes could cause a hit or multiple hits. 23 Q. In Ms. Bondurant's case, is it 24 possible to identify how many other causes of 25 her ovarian cancer were at play other than,</p>
<p style="text-align: right;">Page 531</p> <p>1 because I couldn't do the math fast enough in 2 my head. 3 Q. And, in your opinion, if a 4 woman uses talcum powder for a sufficient 5 amount of time, that woman has an increased 6 risk of ovarian cancer of somewhere between 7 20 and 40%, correct? 8 A. Yes. 9 Q. In an individual woman's case, 10 talcum powder use may alone be sufficient to 11 cause ovarian cancer, depending upon the 12 number of genetic mutations that are caused, 13 or the talcum powder use may require 14 additional risk factors in order to cause the 15 ovarian cancer. 16 Is that fair? 17 A. So the talcum powder use could 18 cause more than one genetic hit to the cell. 19 And each individual woman's background could 20 be different, and what -- her body's reaction 21 to the talcum powder -- so the talcum powder 22 alone can be a cause, and there may be some 23 other risk factor that she has or some other 24 cause. 25 Q. The talcum powder use would</p>	<p style="text-align: right;">Page 533</p> <p>1 in your opinion, her talc use? 2 DR. THOMPSON: Object to form. 3 BY MR. ZELLERS: 4 Q. And if you don't understand 5 that question, I'll try to do better. 6 A. Can you try to do better? 7 Q. Sure. I will try. 8 A. You knew when the words were 9 coming out of your mouth, right? 10 Q. I can't promise. 11 Are there likely other causes 12 of Ms. Bondurant's clear-cell ovarian cancer, 13 in addition to talcum powder use, in your 14 opinion? 15 A. So in my review of her risk 16 factors and her protective factors, she did 17 have a family history that could increase her 18 risk, so that could also be a cause of her 19 cancer. 20 Q. Anything else? 21 A. I think the endometriosis 22 question is still not clear to me because we 23 don't have pathologic confirmation of 24 endometriosis. 25 Q. Anything else?</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 534</p> <p>1 A. I don't think there's anything 2 else in her history that I identified. 3 Smoking would be mucinous 4 cancer, and she did not have mucinous cancer. 5 Q. In Ms. Bondurant's case and in 6 any case, we have the possibility of factors 7 that are, as of now, unknown, correct? 8 That's true for any -- 9 A. All cancers, yeah. 10 Q. Okay. I asked you this 11 yesterday and I don't think we ever reached 12 an agreement, but new question. 13 In Ms. Bondurant's case, are 14 you able to ascribe a percentage that talc 15 caused her ovarian cancer as compared to a 16 percentage that family history caused her 17 ovarian cancer as compared to a percentage 18 that endometriosis caused her ovarian cancer? 19 DR. THOMPSON: Object to form. 20 A. I don't know how I would 21 ever -- I don't know how to answer that 22 question because I don't think of it as a 23 percentage. 24 Are you -- so I guess I'm still 25 not understanding your question.</p>	<p style="text-align: right;">Page 536</p> <p>1 their proportionate cause was of 2 Ms. Bondurant's ovarian cancer? 3 DR. THOMPSON: Object to form. 4 A. That is not something that 5 makes any clinical sense to me, so I'm not 6 sure what you're asking. And I would never 7 say, well, it's a 20% chance that this caused 8 it and a 20% that that caused it and a 20% 9 chance that that caused it. That sounds like 10 that's what you're asking me. 11 BY MR. ZELLERS: 12 Q. Well, let me try to do a little 13 better. And if you can't -- I just want to 14 know if that's an opinion that you either 15 have or may have. 16 Can you attribute or break down 17 among the different risk factors for ovarian 18 cancer, and in Ms. Bondurant's case, we've 19 got talc use, we've got family history and 20 possibly endometriosis. 21 And your opinion is that talc 22 use is a cause, family history may be a 23 cause, and endometriosis, if it was verified, 24 may be a cause, fair? 25 A. Yes.</p>
<p style="text-align: right;">Page 535</p> <p>1 BY MR. ZELLERS: 2 Q. I'm asking -- my job today is 3 to ask you your opinions. 4 A. Yes. 5 Q. So do I understand correctly 6 that, in your opinion, you cannot ascribe a 7 percentage cause of talc to Ms. Bondurant's 8 ovarian cancer or a percentage cause of 9 family history to her ovarian cancer or a 10 percentage cause that endometriosis caused 11 her ovarian cancer? 12 A. Are you asking me to rank what 13 I think the causes are? 14 Q. Well, here's what I'm asking 15 you to do. In Ms. Bondurant's case, she has 16 ovarian cancer. 17 A. Yes. 18 Q. Did talc contribute 20% to her 19 ovarian cancer? Did it contribute 60% to her 20 ovarian cancer? Similarly, did family 21 history contribute 20% to her ovarian cancer 22 or 40 or 60%? Did endometriosis contribute 23 20 or 30 or 40%? 24 Are you able to give an opinion 25 among the different risk factors as to what</p>	<p style="text-align: right;">Page 537</p> <p>1 Q. And I think you told me earlier 2 that your assumption, when you looked at 3 these cases, is: If there is an identifiable 4 risk factor, that it has some role in causing 5 the ovarian cancer, correct? 6 A. Yes. 7 Q. So among, in Ms. Bondurant's 8 case -- in Ms. Bondurant's case, among the 9 risk factors, are you able to say that you 10 think talc was 50% responsible for her 11 ovarian cancer and family history was 30% 12 responsible and endometriosis is 20% 13 responsible, or is that not something that 14 you think, you know, as an expert, that you 15 can ascribe percentages of the risk factors 16 to the cause of her cancer? 17 DR. THOMPSON: Object to form. 18 A. In an individual patient, I 19 would not assess percentage of cause from 20 different individual risk factors. 21 BY MR. ZELLERS: 22 Q. Go back to the -- is it the 23 Wentzensen article? That's the 2021 article 24 that we marked a bit ago that was written 25 with O'Brien as a coauthor.</p>



Judith Wolf, M.D.

Page 538	Page 540
<p>1 MS. GARBER: 47.  2 MR. ZELLERS: What's that?  3 MS. GARBER: 47.  4 MR. ZELLERS: Thank you.  5 THE WITNESS: 47? How did I  6 get so out of order.  7 BY MR. ZELLERS:  8 Q. It shouldn't be too far down  9 the stack.  10 A. There it is. It got to the  11 bottom somehow.  12 There we go. Got it.  13 Q. Go to page 9.  14 A. So this is in her conclusions,  15 or his conclusions?  16 Q. Right.  17 A. I guess he's a man.  18 Q. We'll assume Nicholas, yes.  19 A. We'll assume Nicholas.  20 Q. The authors state, in that  21 first paragraph on the left-hand side, which  22 is part of the conclusion: Independent of  23 the underlying cause, the association between  24 powder use and ovarian cancer risk is weak.  25 The low relative risk translate --</p>	<p>1 opinion.  2 Q. What is your opinion?  3 A. That in something that has no  4 clear medical benefit, that if it increases  5 the risk of a cancer, it should not be used.  6 And I would not call the association weak.  7 It's a rare disease and a 10%, 20%, 30%  8 increased risk is too much.  9 Q. Do you agree that there is a  10 very low absolute risk increase, given the  11 rarity of ovarian cancer?  12 A. I think I already answered that  13 question, and I do not agree with that  14 statement.  15 Q. Further down, the authors say:  16 Given the inability...  17 Do you see where I'm at?  18 A. Yes.  19 Q. Given the inability to  20 attribute a clear causal factor to the  21 observed associations, the lack of a good  22 experimental model, the lack of a specific  23 biomarker for powder-related carcinogenesis,  24 and the inability to rule out confounding by  25 indication, it is difficult to conclude that</p>
Page 539	Page 541
<p>1 A. Wait. Wait. I'm looking at  2 the conclusion. I thought you said the first  3 paragraph in the conclusion.  4 Q. I'm sorry. I'm on page 9, so,  5 no, it is the first paragraph on page 9 --  6 A. Okay.  7 Q. -- which is a part of the  8 conclusion.  9 A. Okay. I gotcha now.  10 Q. All right. So first sentence:  11 Independent of the underlying cause, the  12 association between powder use and ovarian  13 cancer risk is weak.  14 Do you agree with that?  15 A. No.  16 Q. The authors go on to state:  17 The low relative risk translates to a very  18 low absolute risk increase, given the rarity  19 of ovarian cancer.  20 Do you believe that's true?  21 A. I believe that's their  22 conclusion. That's what they say.  23 Q. Do you agree or disagree or  24 don't have an opinion on that statement?  25 A. I have a slightly different</p>	<p>1 the observed associations are causal.  2 Do you agree with that?  3 A. There are some things in that  4 statement that I disagree with and there are  5 some that I agree with.  6 I do think there is evidence to  7 support a causal factor. I do agree there's  8 not a good experimental model. I talked  9 about that several times yesterday. I do  10 agree that there's a lack of a specific  11 biomarker.  12 I'm not sure what it means by  13 inability to rule out confounding by  14 indication, so I don't have an answer for --  15 an opinion about that.  16 Q. Okay.  17 A. And I disagree with it's  18 difficult to conclude the observed  19 associations are causal.  20 Q. These authors in the paper we  21 just looked at discuss the inability, given  22 the body of epidemiology, to rule out the  23 possibility that an unknown confounder is  24 driving the relative risk we're seeing in  25 some of the case-controlled studies.</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 542</p> <p>1 Did you consider that in</p> <p>2 forming your specific causation opinion</p> <p>3 regarding Ms. Bondurant?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. So I'm going to step back and</p> <p>6 say in reviewing all the epidemiologic</p> <p>7 literature as a whole, if they were not so</p> <p>8 consistent where 91% of them show a positive</p> <p>9 association, that would be more concerning to</p> <p>10 me, but that's not true.</p> <p>11 In Ms. Bondurant specifically,</p> <p>12 all of the known risks or protective factors</p> <p>13 I evaluated, and we talked about the ones</p> <p>14 that she had and those that she did not have,</p> <p>15 and so I guess what's the question about</p> <p>16 Ms. Bondurant specifically?</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Whether or not you considered</p> <p>19 the possibility and the inability to rule out</p> <p>20 unknown confounders, you know, potential risk</p> <p>21 factors or confounders that have not been</p> <p>22 identified.</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. Well, I would never think about</p> <p>25 a confounder necessarily in a patient.</p>	<p style="text-align: right;">Page 544</p> <p>1 chlamydia. We've known for a while that</p> <p>2 chronic PID can increase the risk of ovarian</p> <p>3 cancer. But as we've learned more about it,</p> <p>4 we've learned that specifically chlamydial</p> <p>5 PID infections, which are the most common</p> <p>6 cause of PID, increase the risk of ovarian</p> <p>7 cancer.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. You said a moment ago or talked</p> <p>10 about the epidemiologic studies and said 91%</p> <p>11 were -- showed a positive association. Let</p> <p>12 me just clarify.</p> <p>13 Some of those that show a</p> <p>14 positive association are statistically</p> <p>15 significant and some are not, fair?</p> <p>16 A. Some of them the confidence</p> <p>17 interval crosses 1 and some of them -- more</p> <p>18 than half of them it does not.</p> <p>19 Q. In terms of a confounder -- I'm</p> <p>20 not sure we're on the same page, but let me</p> <p>21 use an example.</p> <p>22 So if you're studying an</p> <p>23 association between coffee and pancreatic</p> <p>24 cancer, you need to consider whether</p> <p>25 cigarette smoking is more common in coffee</p>
<p style="text-align: right;">Page 543</p> <p>1 Unknown risk factors, that's -- that could be</p> <p>2 a possibility.</p> <p>3 The risk factor -- we talked</p> <p>4 about this yesterday. The risk factors for</p> <p>5 ovarian cancer have been pretty stable for a</p> <p>6 long time, for the last 30 or 40 years.</p> <p>7 Obesity has become more clear recently only</p> <p>8 because obesity is so much more common and we</p> <p>9 can study it better.</p> <p>10 Q. Is it your testimony that risk</p> <p>11 factors for ovarian cancer -- strike that.</p> <p>12 Is it your testimony that new</p> <p>13 risk factors for ovarian cancer have not been</p> <p>14 identified in the last 20 to 30 years?</p> <p>15 DR. THOMPSON: Object to form.</p> <p>16 A. My testimony is that most of</p> <p>17 the risk factors for ovarian cancer have been</p> <p>18 known about or suspected and refined somewhat</p> <p>19 over the last 30 or 40 years.</p> <p>20 We knew in the '80s that family</p> <p>21 history was a risk factor. It wasn't until</p> <p>22 we had the human genome project and were able</p> <p>23 to identify what those family risk factors</p> <p>24 might be, an inherited genetic mutation.</p> <p>25 We talked yesterday about</p>	<p style="text-align: right;">Page 545</p> <p>1 drinkers than in the rest of the population,</p> <p>2 right, if that's what you were studying?</p> <p>3 A. To look for other potential</p> <p>4 risk factors, yes.</p> <p>5 Q. Right. So --</p> <p>6 A. Yes.</p> <p>7 Q. So in my -- well, it's not</p> <p>8 really a hypothetical. I guess it's an</p> <p>9 analogy.</p> <p>10 There may be an association</p> <p>11 between coffee and pancreatic cancer, but one</p> <p>12 of the things a scientist or medical</p> <p>13 professional would want to look at is whether</p> <p>14 there's a confounder, there's something about</p> <p>15 that coffee group that makes them more</p> <p>16 susceptible to pancreatic cancer, such as</p> <p>17 cigarette smoking. Fair?</p> <p>18 A. Fair.</p> <p>19 Q. So in that example, cigarette</p> <p>20 smoking could be a confounder, because if</p> <p>21 more coffee drinkers are smokers than</p> <p>22 non-coffee drinkers, the association may be</p> <p>23 between smoking and pancreatic cancer and</p> <p>24 not, you know, between coffee drinking and</p> <p>25 pancreatic cancer.</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 546</p> <p>1 DR. THOMPSON: Object to form.  2 BY MR. ZELLERS:  3 Q. It may be the smoking that's  4 driving that association.  5 DR. THOMPSON: Object to form.  6 A. Or it could be both. So you  7 would want to assess that in doing a  8 univariant analysis, looking at each  9 individual factor on its own, and a  10 multivariant analysis where you look at the  11 contraindication of all of them to see is one  12 of them still statistically significant in  13 that case.  14 BY MR. ZELLERS:  15 Q. In our case, your opinion is  16 you don't believe that there is an unknown  17 confounder with talcum powder use as it  18 relates to an association with ovarian  19 cancer?  20 A. I don't believe anything has  21 been identified since the first publication  22 in the '80s that there's something else  23 that's associated with this that's causing  24 ovarian cancer.  25 And what I mean is talcum</p>	<p style="text-align: right;">Page 548</p> <p>1 ovarian cancer, correct?  2 A. Yes.  3 Q. And you acknowledge in any  4 woman's case it's possible that their ovarian  5 cancer is caused by an unknown or  6 undiscovered cause, but you believe in  7 Ms. Bondurant's case the likely cause is her  8 talcum powder use?  9 DR. THOMPSON: Object to form.  10 A. That a cause of her cancer is  11 talcum powder use.  12 BY MR. ZELLERS:  13 Q. The route of talcum powder  14 exposure in Ms. Bondurant's case was through  15 migration, correct?  16 A. Yes.  17 Q. You believe that her ovarian  18 cancer was caused from talcum powder  19 traveling to her ovary -- well, strike that.  20 We talked yesterday about  21 inhalation with Ms. Gallardo. Same question  22 with Ms. Bondurant.  23 Do you believe that her ovarian  24 cancer was caused from talcum powder  25 traveling to her ovaries through inhalation?</p>
<p style="text-align: right;">Page 547</p> <p>1 powder use has not been found to be  2 associated with a confounder in the 40 years  3 since -- nearly 40 years since it's been  4 found to be associated with ovarian cancer.  5 Q. All right. It's possible, but  6 in your opinion unlikely, that Ms. Bondurant  7 could have gotten her ovarian cancer because  8 of a cause that science has yet to discover.  9 Is that a good summary of your  10 opinion --  11 DR. THOMPSON: Object to form.  12 BY MR. ZELLERS:  13 Q. -- on that point?  14 A. No. On the point of  15 confounding, my point is that as long as  16 we've known of the association between  17 genital powder use and ovarian cancer, there  18 have not been found any confounders that  19 would be the cause versus the genital talcum  20 powder use.  21 Q. And I'm going to step beyond  22 that.  23 A. Okay.  24 Q. We've acknowledged and we've  25 discussed that there may be unknown causes of</p>	<p style="text-align: right;">Page 549</p> <p>1 A. I -- my assessment is that it's  2 from her genital talcum powder use and  3 migration. Inhalation could be a part of  4 that.  5 Q. You've not attempted or made  6 any determination of how much talc  7 Ms. Bondurant was exposed to over the period  8 of time she used talcum powder; is that  9 right?  10 DR. THOMPSON: Object to form.  11 A. So because what I have on her  12 talcum powder use, it says from infancy to  13 2015, baby powder, and Shower To Shower  14 from '70 to '80. There's no correlation  15 between infant use of powder and cancer, as  16 far as I'm aware. And so assuming that she  17 went through menarche around the time of 12,  18 which would be a little older than average,  19 but we'll say 12, and she used it three to  20 five times a week until 2015, but I know she  21 had her tubes tied in 1987 -- I'm doing a lot  22 of math here -- I think it was something like  23 16 years, 15 years of use, and I multiplied  24 that by four if she used it three to five  25 times a week, and it was something like 5600</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 550</p> <p>1 times that she used it, to try to get an 2 assessment of how much she used. 3 BY MR. ZELLERS: 4 Q. And in your view, that amount 5 of usage would be a sufficient amount of 6 talcum powder to, in your opinion, be a cause 7 of her ovarian cancer, correct? 8 A. Certainly that's supported in 9 the epidemiologic literature where they 10 looked at -- 11 Q. We talked yesterday -- 12 A. -- women with that much use. 13 (Simultaneous discussion 14 interrupted by the stenographer.) 15 A. Where they assessed that -- the 16 amount of use. I don't remember my exact 17 words, but that seems about right. 18 BY MR. ZELLERS: 19 Q. I believe I understand your 20 opinion to be that in a given case, there may 21 be an insufficient amount of talcum powder 22 use for you to conclude that the talcum 23 powder use is a cause of ovarian cancer, but 24 here there's sufficient use; is that right? 25 A. So it's not just amount of use.</p>	<p style="text-align: right;">Page 552</p> <p>1 come up with or develop a case-specific 2 opinion, whether a woman alleges that she put 3 the talcum powder on their underwear or if 4 they put it on pads or if they actually put 5 it on their body? Does any of that matter to 6 you in terms of case-specific opinions? 7 DR. THOMPSON: Object to form. 8 A. You mean put it on their 9 genital area as -- directly on their body? 10 BY MR. ZELLERS: 11 Q. Yes, as opposed to putting it 12 on pads or putting it in their underwear. 13 A. Not specifically. 14 Q. All of those, if there was 15 sufficient duration, would be the types of 16 use that you believe could cause or result in 17 the migration of the talcum powder to the 18 fallopian tubes and the ovaries; is that 19 right? 20 A. So all of those ways -- and I 21 don't -- I wouldn't say it's duration 22 specifically, because some of it is also the 23 individual patient's reactions to the talc, 24 the body's reaction to it. Duration is part 25 of that.</p>
<p style="text-align: right;">Page 551</p> <p>1 It's -- it's is the tract open. If somebody 2 got their tubes tied at 21 and started using 3 talcum powder daily at 28, that would be hard 4 for me to make an assessment of use. 5 If somebody used talcum powder 6 once in their entire life, that would be a 7 challenge. 8 Q. And I think we talked yesterday 9 that you've looked at some cases and have 10 determined there's not enough evidence that 11 talcum powder caused ovarian cancer, and 12 those would be examples of cases, you know, 13 hypothetical examples -- 14 A. Hypothetical. 15 Q. -- yes, in which you would not 16 think there was sufficient use for talcum 17 powder to be a cause, correct? 18 A. That's correct. 19 Q. So while you, you know, don't 20 have a precise estimate of the amount of 21 talcum powder exposure that Ms. Bondurant 22 had, in your view, she had sufficient 23 exposure? 24 A. Yes. 25 Q. Does it matter to you, when you</p>	<p style="text-align: right;">Page 553</p> <p>1 Q. So in your opinion, the science 2 equally supports the ability of talc applied 3 externally to the underwear to travel to the 4 ovaries as it does talc applied to the 5 perineum to travel to the ovaries, fair? 6 A. So some of the studies looked 7 at those specific questions and others did 8 not. It's my opinion that generally all of 9 those would have the same access. 10 Q. We talked yesterday about the 11 potential for bias of a woman who's making a 12 claim, you know, in a case that talcum powder 13 use caused ovarian cancer. 14 I believe your methodology and 15 the way you approach these cases is to assume 16 that any of the women who used talcum powder, 17 to believe their use; is that right? 18 DR. THOMPSON: Object to form. 19 A. Yes, generally. If they're 20 deposed, it's under oath, I would assume 21 they're telling the truth. 22 BY MR. ZELLERS: 23 Q. You do not consider that there 24 may be a bias because a particular patient or 25 plaintiff has brought a lawsuit? I mean,</p>

Judith Wolf, M.D.

Page 554	Page 556
<p>1 you -- you don't consider that, correct?</p> <p>2 A. I would assume that if they</p> <p>3 were under oath, that their bias would be</p> <p>4 negated. I wouldn't lie about something</p> <p>5 under oath to try to get what I wanted.</p> <p>6 Q. In your report you describe the</p> <p>7 inflammatory properties of talc when</p> <p>8 introduced into the peritoneal cavity.</p> <p>9 That's your report, page 5.</p> <p>10 A. Uh-huh.</p> <p>11 Q. And that J&amp;J submitted a patent</p> <p>12 for nonirritating starch-based dusting powder</p> <p>13 due to the severe postoperative complications</p> <p>14 and strong inflammatory reaction.</p> <p>15 Did I reference that correctly</p> <p>16 from page 5 of your report?</p> <p>17 A. I'm looking at page 5.</p> <p>18 Q. Sure.</p> <p>19 A. In 1998, Janssen, a subsidiary</p> <p>20 of Johnson &amp; Johnson, changed -- oh, that's</p> <p>21 the diaphragm part.</p> <p>22 In 1953, Johnson &amp; Johnson</p> <p>23 submitted a patent application for a</p> <p>24 nonirritating starch-based dusting powder due</p> <p>25 to severe postoperative complications and</p>	<p>1 Q. Pelvic inflammatory disease</p> <p>2 would be painful; is that right?</p> <p>3 A. Well, acute pelvic inflammatory</p> <p>4 disease is painful. Chronic inflammatory</p> <p>5 disease may or may not be painful.</p> <p>6 Q. Talc and the way talc operates,</p> <p>7 in your view, it induces chronic</p> <p>8 inflammation, correct?</p> <p>9 A. Yes.</p> <p>10 Q. In your view, that's a</p> <p>11 completely silent-type activity, correct?</p> <p>12 And by silent, I mean it doesn't cause pain;</p> <p>13 it is -- it's not something that a patient</p> <p>14 would be aware of?</p> <p>15 A. Generally not.</p> <p>16 Q. And that's why ovarian cancer</p> <p>17 is diagnosed so late; is that right?</p> <p>18 DR. THOMPSON: Object to form.</p> <p>19 A. No, those two things are</p> <p>20 separate. Ovarian cancer is diagnosed late</p> <p>21 because the symptoms of ovarian cancer are</p> <p>22 subtle and they're symptoms that are common</p> <p>23 among other things. It has nothing to do</p> <p>24 with inflammation.</p> <p>25 ///</p>
Page 555	Page 557
<p>1 strong inflammatory reactions frequently</p> <p>2 caused by talc.</p> <p>3 Yes.</p> <p>4 Q. Do you think that the strong</p> <p>5 inflammatory reaction took place in</p> <p>6 Ms. Bondurant for decades with no symptoms?</p> <p>7 A. Chronic inflammation can have</p> <p>8 no symptoms. It's a local cellular reaction</p> <p>9 that causes cancer, not a systemic reaction.</p> <p>10 Q. Is that generally how chronic</p> <p>11 inflammation operates in the human body?</p> <p>12 A. Depends on what the chronic</p> <p>13 inflammation is causing. And it can -- when</p> <p>14 we think about cancer specifically and</p> <p>15 inflammation as a cause, generally cancer is</p> <p>16 not a painful process. It's a change at the</p> <p>17 cellular level that changes the cells there,</p> <p>18 does not cause a systemic inflammatory</p> <p>19 reaction. It's happening right there at the</p> <p>20 cell.</p> <p>21 Q. In your view, can chronic</p> <p>22 inflammation cause pain at times?</p> <p>23 A. Chronic inflammation for some</p> <p>24 diseases causes pain, such as rheumatoid</p> <p>25 arthritis.</p>	<p>1 BY MR. ZELLERS:</p> <p>2 Q. Well, if the inflammation was</p> <p>3 of a type that caused pain or discomfort to a</p> <p>4 patient, then that might result in her</p> <p>5 ovarian cancer being diagnosed earlier,</p> <p>6 correct?</p> <p>7 MS. GARBER: Object to the</p> <p>8 form.</p> <p>9 A. That's a lot of hypotheticals,</p> <p>10 but possibly.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. Right. I mean, one of the</p> <p>13 factors, at least in your view, as to why</p> <p>14 ovarian cancer is diagnosed late is because</p> <p>15 if there is a chronic inflammatory process</p> <p>16 that's ongoing that's causing and/or</p> <p>17 contributing to the ovarian cancer, it's not</p> <p>18 causing pain, correct?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. It's not causing discomfort to</p> <p>22 the patient?</p> <p>23 A. So the beginning of that</p> <p>24 question, I thought you were asking why do I</p> <p>25 think ovarian cancer is found late. And I</p>



Judith Wolf, M.D.

Page 558	Page 560
<p>1 think ovarian cancer is found late because</p> <p>2 the symptoms are nonspecific and they happen</p> <p>3 in women who have -- more commonly have those</p> <p>4 symptoms from a different diagnosis, and</p> <p>5 cancer generally does not cause pain.</p> <p>6 Do I think that the chronic</p> <p>7 inflammatory response that talc and</p> <p>8 endometriosis and incessant ovulation and a</p> <p>9 lot of other things can cause -- that can</p> <p>10 cause ovarian cancer can cause pain? No.</p> <p>11 Those two things I think about separately.</p> <p>12 Q. Surgical gloves and talc on</p> <p>13 surgical gloves can cause a strong</p> <p>14 inflammatory reaction; is that right?</p> <p>15 MS. GARBER: Object to the</p> <p>16 form.</p> <p>17 A. An acute inflammatory reaction.</p> <p>18 MR. ZELLERS: Ms. Garber, did</p> <p>19 you say something?</p> <p>20 MS. GARBER: I said object to</p> <p>21 the form.</p> <p>22 MR. ZELLERS: Okay. And, I'm</p> <p>23 sorry, could you read the witness'</p> <p>24 answer to me again? Sorry.</p> <p>25 -----</p>	<p>1 the substances that they secrete that cause</p> <p>2 the oxidative stress. If they're localized</p> <p>3 or if they are systemic, things like</p> <p>4 interleukins and growth factors and other</p> <p>5 cytokines that cells release.</p> <p>6 Q. We discussed yesterday that</p> <p>7 it's your opinion that the talcum powder</p> <p>8 causes, in this case, Ms. Bondurant's ovarian</p> <p>9 cancer, correct?</p> <p>10 A. So we didn't talk about</p> <p>11 Ms. Bondurant yesterday.</p> <p>12 Q. I understand, and so let me</p> <p>13 ask -- or try to ask a better question. I'm</p> <p>14 trying to generalize this.</p> <p>15 You're not saying in</p> <p>16 Ms. Bondurant's case that her ovarian cancer</p> <p>17 was caused by asbestos or by heavy metals. I</p> <p>18 mean, those are not opinions -- specific</p> <p>19 opinions that you have, correct?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. So my opinion is it's her</p> <p>22 talcum powder use, which has been shown to</p> <p>23 have platy talc, fibrous talc, asbestos,</p> <p>24 heavy metals, caused her cancer.</p> <p>25 ///</p>
Page 559	Page 561
<p>1 (The following portion of the</p> <p>2 record was read.)</p> <p>3 ANSWER: An acute inflammatory</p> <p>4 reaction.</p> <p>5 (End of readback.)</p> <p>6 -----</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. So does an acute inflammatory</p> <p>9 reaction generally cause pain?</p> <p>10 A. It can.</p> <p>11 Q. And I guess similarly a chronic</p> <p>12 inflammation may or may not cause pain,</p> <p>13 correct?</p> <p>14 A. Depending on the site and the</p> <p>15 level of the inflammation, whether it's</p> <p>16 systemic or cellular.</p> <p>17 Q. Does science understand or can</p> <p>18 science explain why some chronic inflammation</p> <p>19 is painful and other chronic inflammation is</p> <p>20 not?</p> <p>21 A. Some of it is because of the</p> <p>22 substances that cause the -- the substances</p> <p>23 released by the cells, in this case, the</p> <p>24 ovarian cells themselves or any inflammatory</p> <p>25 cells, macrophages around the ovarian cells,</p>	<p>1 BY MR. ZELLERS:</p> <p>2 Q. It's a combination of talc,</p> <p>3 whatever is in the talc --</p> <p>4 A. It's whatever is in the talc.</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. -- that you believe, in</p> <p>8 Ms. Bondurant's case and in all of the cases</p> <p>9 that you have reviewed, caused or is a cause</p> <p>10 of ovarian cancer, correct?</p> <p>11 DR. THOMPSON: Object to form.</p> <p>12 A. So it's the talc use, which can</p> <p>13 have any or all of those substances in it,</p> <p>14 that causes it.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. The talc may or may not have</p> <p>17 trace amounts of asbestos. It may have, you</p> <p>18 know, the amounts of heavy metals that are</p> <p>19 contained in the talc. But it's the talc</p> <p>20 itself that causes or is a cause of ovarian</p> <p>21 cancer, in your view, correct?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 MS. GARBER: Object to the</p> <p>24 form.</p> <p>25 A. It's the talc itself. And in</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 562</p> <p>1 some cases, like Ms. Gallardo that we talked</p> <p>2 about yesterday, we found that there was</p> <p>3 evidence of talc fibers and asbestos fibers</p> <p>4 in her cancer.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Well, do we know if those were</p> <p>7 asbestos fibers -- and let me withdraw, lay a</p> <p>8 little foundation here.</p> <p>9 We established yesterday you're</p> <p>10 not a geologist, correct?</p> <p>11 A. I'm not.</p> <p>12 Q. You're not an expert in</p> <p>13 asbestos, correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. I would say I'm an expert in</p> <p>16 the health effects, in gynecologic health of</p> <p>17 women and asbestos.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. Are you aware that tremolite</p> <p>20 fibers, which I believe Dr. Godleski found,</p> <p>21 or particles -- we'd have to go back and look</p> <p>22 at the report to see -- can either be</p> <p>23 asbestiform or nonasbestiform?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. So tremolite fibers are</p>	<p style="text-align: right;">Page 564</p> <p>1 A. I would defer to IARC 2012 that</p> <p>2 defined tremolite as asbestos.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. In terms of whether a</p> <p>5 particular mineral is or is not asbestos,</p> <p>6 would you defer to a geologist?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 MS. GARBER: Object to the</p> <p>9 form.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Or a mineralogist?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. I mean, I'm deferring to IARC</p> <p>14 for what is asbestos, and they list the types</p> <p>15 of asbestos and tremolite is one of those.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. So you would not defer to a</p> <p>18 geologist or to a mineralogist as to whether</p> <p>19 a particular mineral is asbestos or not?</p> <p>20 DR. THOMPSON: Object to form,</p> <p>21 asked and answered.</p> <p>22 A. As to whether or not tremolite</p> <p>23 is asbestos? I have no reason to think that</p> <p>24 IARC 2012 is wrong when they say that</p> <p>25 tremolite is asbestos.</p>
<p style="text-align: right;">Page 563</p> <p>1 considered asbestos. That's in the IARC</p> <p>2 2012.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. So in your view, all tremolite</p> <p>5 is asbestos; that there are no nonasbestos</p> <p>6 forms of tremolite?</p> <p>7 MS. GARBER: Object to the</p> <p>8 form.</p> <p>9 A. As far as I'm aware, tremolite</p> <p>10 is considered asbestos.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. All right. So you're making an</p> <p>13 assumption that anytime you hear or see the</p> <p>14 word "tremolite," that it's asbestos,</p> <p>15 correct?</p> <p>16 A. I'd have to look at</p> <p>17 Dr. Godleski's report about the particles or</p> <p>18 fibers, but if I saw tremolite fibers, I</p> <p>19 would consider that asbestos.</p> <p>20 Q. My question again is: In terms</p> <p>21 of the types of asbestos and whether there's</p> <p>22 minerals that can be both asbestos and</p> <p>23 nonasbestos but called the same name, you</p> <p>24 would defer to a geologist on that, correct?</p> <p>25 DR. THOMPSON: Object to form.</p>	<p style="text-align: right;">Page 565</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. To get where I think I need to</p> <p>3 get, you are not going to come in and talk to</p> <p>4 the jury specifically about the</p> <p>5 carcinogenicity of asbestos or the</p> <p>6 carcinogenicity of heavy metals.</p> <p>7 What you're going to talk to</p> <p>8 the jury and give opinions on is the</p> <p>9 carcinogenicity of talcum powder, which may</p> <p>10 or may not have trace amounts of asbestos,</p> <p>11 which, you know, does have trace amounts of</p> <p>12 heavy metals -- you're going to talk about</p> <p>13 the carcinogenicity of the talc with whatever</p> <p>14 is in the talc; is that fair?</p> <p>15 MS. GARBER: Object to the</p> <p>16 form.</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. So the -- in explaining the</p> <p>19 carcinogenicity of the talc, I would talk</p> <p>20 about all of the things in the talc that can</p> <p>21 be carcinogenic or are carcinogenic, and the</p> <p>22 ways that those things can cause cancer.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. Did you do any investigation in</p> <p>25 Ms. Bondurant's case as to whether or not she</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 566</p> <p>1 had been exposed to asbestos over the course 2 of her lifetime? 3 A. So I believe all that I had in 4 Ms. Bondurant's case is her daughter's 5 deposition to know what her life was like, 6 and I don't remember -- recall the details of 7 that, but I'm -- it's whatever is in there. 8 I didn't know how else could I find out was 9 she -- did she work in asbestos. I don't 10 believe that she did or have any reason to 11 think that she was exposed to asbestos. 12 Q. Do you have an opinion as to 13 whether or not asbestos exposure can cause 14 clear-cell ovarian cancer? 15 A. So asbestos is carcinogenic, 16 again, referring back to IARC '12, and can 17 cause ovarian cancer. 18 I don't know that -- and I'd 19 have to look at the details again. I don't 20 know that they looked specifically at the 21 cell types in that. I know that they ruled 22 out mesothelioma as the cancer in some of the 23 cases and were able to say that it was 24 epithelial ovarian cancer, but I don't 25 remember the details about the subtypes.</p>	<p style="text-align: right;">Page 568</p> <p>1 were similar to most of the bottles that he 2 tested from the '60s to 2000s, I would assume 3 that one or both of those was in at least 4 some of them. 5 BY MR. ZELLERS: 6 Q. As far as you know, we have no 7 samples of any of the bottles of talc that 8 Ms. Bondurant used, correct? 9 A. As far as I know, we don't. 10 And I would not expect that we would. 11 Q. Do you have any opinions in 12 this case that it was a particular heavy 13 metal or a particular fragrance compound of 14 baby powder that was the cause of 15 Ms. Bondurant's ovarian cancer? 16 DR. THOMPSON: Object to form. 17 A. It's my opinion it's the talcum 18 powder use. 19 BY MR. ZELLERS: 20 Q. Do you think the inflammatory 21 mechanism for heavy metals and/or fragrances 22 is the same as talc? 23 DR. THOMPSON: Object to form. 24 A. I think it could be the same or 25 they could act in concert, if they're all in</p>
<p style="text-align: right;">Page 567</p> <p>1 Q. Is it your opinion that 2 Ms. Bondurant's clear-cell ovarian cancer was 3 caused by heavy metals? 4 DR. THOMPSON: Object to form. 5 A. It's my opinion that her 6 ovarian cancer was caused by her talc use. 7 BY MR. ZELLERS: 8 Q. You're not offering an opinion 9 as it relates to Ms. Bondurant -- well, let 10 me strike that. 11 You have no evidence one way or 12 the other as to if there was asbestos 13 contamination in any of the bottles of talcum 14 powder used -- that Ms. Bondurant used; is 15 that right? 16 DR. THOMPSON: Object to form. 17 A. I'm not aware that there was 18 any of the bottles that she used that were 19 available for analysis. What I know of from 20 Dr. Rigler's report is that in the Johnson &amp; 21 Johnson baby powders that he analyzed, his 22 lab analyzed, two-thirds of them had evidence 23 of asbestos, and I think 54 out of 55 had 24 talc fibers. 25 So if the bottles that she used</p>	<p style="text-align: right;">Page 569</p> <p>1 the same product. 2 BY MR. ZELLERS: 3 Q. Well, do you know whether or 4 not the inflammatory mechanism for heavy 5 metals and fragrances is the same as you 6 believe it is for talc? 7 DR. THOMPSON: Object to form. 8 A. I think it could be the same or 9 it could be slightly different. 10 BY MR. ZELLERS: 11 Q. Do you know the fragrance 12 ingredients for cornstarch baby powder? 13 A. I don't. 14 Q. Do you know if the fragrance 15 ingredients for cornstarch baby powder are 16 the same as they are for talc-based baby 17 powder? 18 A. I don't. 19 Q. Do you believe that the 20 etiology for clear-cell carcinoma is the same 21 as the etiology for high-grade serous 22 carcinoma? 23 DR. THOMPSON: Object to form. 24 A. So we talked about this 25 earlier, that the common genetic</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 570</p> <p>1 abnormalities that are seen in the different</p> <p>2 subtypes of epithelial ovarian cancer,</p> <p>3 high-grade serous, low-grade serous,</p> <p>4 clear-cell being some of those, the common</p> <p>5 genetic mutations are different. Some of</p> <p>6 them are different, anyway.</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. But did you make a</p> <p>9 determination about when it was that</p> <p>10 Ms. Bondurant's clear-cell carcinoma began to</p> <p>11 develop?</p> <p>12 A. No. That's a question I get</p> <p>13 asked all the time and I don't have a good</p> <p>14 answer for how long -- the cancer from the</p> <p>15 time it starts until it grows. Cancers do</p> <p>16 tend to grow in a logarithmic manner, and so</p> <p>17 once it starts growing and becomes grossly</p> <p>18 visible, it seems like it's growing fast.</p> <p>19 But from the -- from when it starts until --</p> <p>20 until it becomes a cancer, generally people</p> <p>21 say one to two years, but I'm not aware of</p> <p>22 good evidence to support that.</p> <p>23 What I tell patients is once we</p> <p>24 know it's there, we don't sit on it and do</p> <p>25 nothing about it, unless there isn't anything</p>	<p style="text-align: right;">Page 572</p> <p>1 Q. The latency period you believe</p> <p>2 is 15 to 20 years?</p> <p>3 A. For ovarian cancer, and for</p> <p>4 most cancers. And a lot of that data comes</p> <p>5 from the atomic bombs that were dropped in</p> <p>6 Japan in World War II and the survivors and</p> <p>7 the time it took for them to get cancer.</p> <p>8 Q. Do you believe that in any</p> <p>9 individual, in like Ms. Bondurant, for</p> <p>10 example, that you should discount the</p> <p>11 previous 10 years before her diagnosis as not</p> <p>12 contributing to the development of ovarian</p> <p>13 cancer?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. Generally, I would not, because</p> <p>16 it's continued injuries that could continue</p> <p>17 to cause mutations.</p> <p>18 In Ms. Bondurant specifically,</p> <p>19 she had her tubes tied in '87 and her cancer</p> <p>20 was diagnosed in 2018, so...</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. All right. So you would not</p> <p>23 consider any talcum powder use between 1987</p> <p>24 and 2018, you know, as causing or</p> <p>25 contributing to her ovarian cancer, correct?</p>
<p style="text-align: right;">Page 571</p> <p>1 we can do about it.</p> <p>2 Q. I think I saw in your earlier</p> <p>3 testimony that you believe the latency period</p> <p>4 from ovarian cancer can be anywhere from 15</p> <p>5 to 20 years; is that right?</p> <p>6 A. Yes.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. That's a different question,</p> <p>9 though. That's how long does an exposure</p> <p>10 that can be carcinogenic, how long does that</p> <p>11 take until the cancer is there?</p> <p>12 I think that's a different</p> <p>13 question than you asked me before.</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. And that would be -- what you</p> <p>16 just described would be the latency --</p> <p>17 A. No. What I described is once</p> <p>18 there's a cancer, how long has it been there</p> <p>19 until it's found? That's what I was</p> <p>20 describing.</p> <p>21 Q. And you believe that would be</p> <p>22 the latency period?</p> <p>23 A. No, the latency period is the</p> <p>24 time of the exposure until the cell becomes</p> <p>25 cancerous.</p>	<p style="text-align: right;">Page 573</p> <p>1 DR. THOMPSON: Object to form.</p> <p>2 A. So I believe that the important</p> <p>3 part of her use was prior to her tubes being</p> <p>4 tied.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Prior to 1987?</p> <p>7 A. Yes.</p> <p>8 Q. Okay. You were not one of</p> <p>9 Ms. Bondurant's treating physicians, correct?</p> <p>10 A. No, I was not.</p> <p>11 Q. You were not involved in any</p> <p>12 diagnosis or treatment of her ovarian cancer;</p> <p>13 is that right?</p> <p>14 A. No, I was not.</p> <p>15 Q. Ms. Bondurant passed away in</p> <p>16 October of 2020.</p> <p>17 Did you ever have an</p> <p>18 opportunity to meet her?</p> <p>19 A. I did not.</p> <p>20 Q. Have you ever spoken with her</p> <p>21 husband?</p> <p>22 A. No.</p> <p>23 Q. Her children?</p> <p>24 A. No.</p> <p>25 Q. Did you ever make a request to</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 574</p> <p>1 the attorneys if you could meet with or speak 2 with Ms. Bondurant's family? 3 A. No. 4 Q. Have you ever spoken with any 5 of Ms. Bondurant's treating physicians about 6 her case? 7 A. No. 8 Q. Page 30 of your amended report, 9 and I think this will be on your materials 10 list, these are the case-specific materials 11 that you reviewed; is that right? 12 It's not a number, but it comes 13 right after page 29. 14 A. Yes. 15 Q. So there are a lot of records 16 here; is that right? 17 A. Yes. 18 Q. Did you look at each of the 19 medical records? 20 A. I did. 21 Q. I assume that the medical 22 records and that all of these materials were 23 provided to you by counsel; is that right? 24 A. Yes. 25 MR. ZELLERS: I have no more</p>	<p style="text-align: right;">Page 576</p> <p>1 deposition; is that right? 2 A. Yes. 3 Q. Are the case-specific opinions 4 that you expect to provide at any trial or 5 hearing in the Judkins matter set forth on 6 pages 21 to 23 of the report, Deposition 7 Exhibit 8? 8 A. Yes. 9 Q. It's your opinion that talcum 10 powder was a cause of Ms. Judkins' cancer; is 11 that right? 12 A. That's correct. 13 Q. If Ms. Judkins had never used 14 talcum powder, she never would have gotten 15 ovarian cancer; is that what you're saying? 16 DR. THOMPSON: Object to form. 17 A. What I'm saying is that 18 Ms. Judkins used talcum powder and she got 19 ovarian cancer, and that is the only risk 20 factor that I could find in her history. And 21 she used it daily for 46 years. 22 BY MR. ZELLERS: 23 Q. You're not saying that if she 24 had never used talc, she never would have 25 gotten ovarian cancer, are you?</p>
<p style="text-align: right;">Page 575</p> <p>1 questions on Bondurant. We've got two 2 other cases. You want to take a lunch 3 break and then come back and do those? 4 They will be shorter -- 5 Let's go off the record. 6 (Recess taken, 11:43 a.m. to 7 1:02 p.m. CDT) 8 BY MR. ZELLERS: 9 Q. Dr. Wolf, are you ready to 10 continue? 11 A. I am. 12 Q. The third case that you have 13 issued case-specific opinions in is 14 Ms. Judkins' case; is that right? 15 A. That's correct. 16 Q. Your case-specific -- well, 17 withdraw that. 18 You have in front of you your 19 case-specific report in the Judkins case that 20 we've marked as Deposition Exhibit 8; is that 21 right? 22 A. Yes. 23 Q. The first 21 pages of this 24 report is the same as the general amended 25 report that we have discussed earlier in this</p>	<p style="text-align: right;">Page 577</p> <p>1 DR. THOMPSON: Object to form. 2 A. What I'm saying is some women 3 who get ovarian cancer have never used talc, 4 and in Ms. Judkins' case, she got ovarian 5 cancer and she used talc. 6 BY MR. ZELLERS: 7 Q. Ms. Judkins was 60 years old at 8 her diagnosis? 9 A. Yes. 10 Q. Could Ms. Judkins' age -- well, 11 let me withdraw that. 12 Was Ms. Judkins' age a risk 13 factor for ovarian cancer? 14 A. Advancing age can always be a 15 risk factor. She is slightly younger than 16 the average age, so I wouldn't separate it 17 out in her case as a risk factor. 18 I think I talked yesterday 19 about an example of ninety -- I've had women 20 in their nineties, and then I would 21 definitely call age a risk factor. 22 Q. Age generally does increase a 23 woman's risk for mutations, correct? 24 A. Age increases anyone's risk for 25 mutations.</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 578</p> <p>1 Q. It's your opinion that a 2 60-year old woman, that that is not old 3 enough to be considered a risk factor for 4 ovarian cancer? 5 DR. THOMPSON: Object to form. 6 A. I would say that age 60, likely 7 anyone who's lived to 60 years has had some 8 mutations. In ovarian cancer specifically, 9 60 I don't consider a risk factor, that age 10 of 60 as a risk factor. 11 BY MR. ZELLERS: 12 Q. All right. Ms. Judkins at 13 60 years old may have had mutations related 14 to age, but in your view, the mutations, or 15 at least some of the mutations that resulted 16 in her ovarian cancer, were from her talcum 17 powder use? 18 A. Some of the injuries to her 19 cells that led to cancer, yes. 20 Q. Did Ms. Judkins have a family 21 history of cancer? 22 And I can show you the 23 plaintiff profile form, if need be. 24 A. Yes. She had a maternal uncle 25 with kidney cancer and a paternal great aunt</p>	<p style="text-align: right;">Page 580</p> <p>1 through inhalation? 2 A. I can't disprove that. She 3 applied it to her genital area. I think that 4 would be the most risk for her exposure. 5 Q. You do not intend to go in -- 6 strike that. 7 You do not intend to testify at 8 trial that her route of exposure was 9 inhalation. Your testimony will be that her 10 most likely route of exposure was through the 11 genital tract. Correct? 12 DR. THOMPSON: Object to form. 13 A. I believe her most likely route 14 of exposure was through her genital tract. 15 BY MR. ZELLERS: 16 Q. Just a general question. You 17 can look at page 12 or 13 of your report 18 here, but one of the articles that you're now 19 citing is the Psooy article. 20 Are you familiar with that, 21 P-S-O-O-Y? 22 A. Yes. 23 Q. And in that article, that 24 article demonstrated that bath water can 25 become entrapped in the vagina in females</p>
<p style="text-align: right;">Page 579</p> <p>1 with breast cancer. 2 Q. That family history would be a 3 risk factor for the development of ovarian 4 cancer, correct? 5 DR. THOMPSON: Object to form. 6 A. No. No. One -- I guess a 7 paternal great aunt would. A third-degree 8 relative with breast cancer would not. And 9 the kidney cancer on her mother's side would 10 not be related to her -- a risk of ovarian 11 cancer. 12 BY MR. ZELLERS: 13 Q. Could Ms. Judkins' family 14 history of cancer have played a role in her 15 development of ovarian cancer? 16 DR. THOMPSON: Object to form. 17 A. It's unlikely. 18 BY MR. ZELLERS: 19 Q. You believe that the route of 20 exposure in Ms. Judkins' case was through 21 migration? 22 A. Yes. 23 Q. Do you believe that 24 Ms. Judkins' ovarian cancer was caused from 25 talcum powder traveling to her ovaries</p>	<p style="text-align: right;">Page 581</p> <p>1 with normal anatomy. 2 Is that what you cite it for? 3 A. Yes. 4 Q. Would you agree it would be a 5 rare occurrence for a woman to have water 6 trapped in her vagina? 7 DR. THOMPSON: Object to form. 8 A. It depends on how long it would 9 be in her vagina, and I don't have an answer 10 to that. 11 BY MR. ZELLERS: 12 Q. Well, if there's an open 13 system -- and you believe there is an open 14 system, correct? 15 A. Yes. 16 Q. Why would water get trapped in 17 the vagina? Why would it not make its way 18 further up the reproductive tract? 19 DR. THOMPSON: Object to form. 20 A. My suspicion is that it doesn't 21 remain entrapped very long and it falls out 22 the vagina. 23 BY MR. ZELLERS: 24 Q. I understand falling out, but 25 if you're correct and if there is an open</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 582</p> <p>1 system, why would it not make its way further</p> <p>2 up the reproductive tract?</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 A. I'm going to say I'm not sure</p> <p>5 that anyone has proven it doesn't. It's --</p> <p>6 water would be a challenging thing to study</p> <p>7 since the body has water all the time.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. I also have one question, going</p> <p>10 back to Ms. Garber's client, Ms. Gallardo.</p> <p>11 Cramer 2016 we talked about</p> <p>12 yesterday. And if you need me to pull it</p> <p>13 back out, I can. But that showed no</p> <p>14 significant association for ovarian</p> <p>15 endometrioid cancer in postmenopausal women,</p> <p>16 correct?</p> <p>17 A. I'd have to look at that part</p> <p>18 of the paper again. I don't remember that</p> <p>19 specific.</p> <p>20 Does it have an exhibit number?</p> <p>21 Maybe I have it here.</p> <p>22 (Technical recess requested by</p> <p>23 the stenographer.)</p> <p>24 (Recess taken, 1:12 p.m. to</p> <p>25 1:14 p.m. CDT)</p>	<p style="text-align: right;">Page 584</p> <p>1 Did you attempt to determine</p> <p>2 how much talc Ms. Judkins was exposed to over</p> <p>3 the time period she claims to have used talc</p> <p>4 from approximately 1970 to 2015?</p> <p>5 A. So that was a 46-year period of</p> <p>6 time. And so if she was using it daily,</p> <p>7 which is what she reported in her deposition,</p> <p>8 that would be thousands of times. And the</p> <p>9 frequency and the duration of her use causing</p> <p>10 her cancer is what's supported by the</p> <p>11 epidemiologic literature, looking at duration</p> <p>12 and frequency of use.</p> <p>13 Q. And as we've talked in the</p> <p>14 other cases, there may be some level of</p> <p>15 exposure that you, you know, would question</p> <p>16 or say did not support talcum powder use as a</p> <p>17 cause or a contributing cause of ovarian</p> <p>18 cancer, but in Ms. Judkins' case, you believe</p> <p>19 that she had sufficient exposure, correct?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. So there are times in reviewing</p> <p>22 the whole individual case where I would not</p> <p>23 think that talcum powder played a role.</p> <p>24 Again, that would be if there was no way for</p> <p>25 the talcum powder to get there, the woman had</p>
<p style="text-align: right;">Page 583</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Dr. Wolf, when we went off the</p> <p>3 record, I'd asked the question as to whether</p> <p>4 you agree that the Cramer 2016 article showed</p> <p>5 no significant association for ovarian</p> <p>6 endometrioid cancer in postmenopausal women.</p> <p>7 A. So in that paper, Table 4 I'm</p> <p>8 looking at, he separated out the different</p> <p>9 cell types. There were 30 premenopausal</p> <p>10 women with endometrioid-type -- cell-type</p> <p>11 cancer and there were 37 postmenopausal</p> <p>12 women. Both of them had a positive</p> <p>13 association; 1.34 in premenopausal, 1.36 in</p> <p>14 postmenopausal. The confidence intervals</p> <p>15 crossed 1 in both of them.</p> <p>16 So there was a positive</p> <p>17 association. In neither pre- or</p> <p>18 postmenopausal was it statistically</p> <p>19 significant, but the numbers for each of</p> <p>20 those were small when you separated them out.</p> <p>21 Q. Thank you.</p> <p>22 I have asked previously whether</p> <p>23 you attempted to determine -- and let me just</p> <p>24 ask a new question with respect to</p> <p>25 Ms. Judkins.</p>	<p style="text-align: right;">Page 585</p> <p>1 had a hysterectomy and/or her tubes tied, or</p> <p>2 she maybe used it once.</p> <p>3 But Ms. Judkins used it for</p> <p>4 many years daily, thousands of times, which</p> <p>5 is supported by the epidemiologic literature.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. One of the assumptions you've</p> <p>8 made in this case is that Ms. Judkins did use</p> <p>9 talcum powder on her perineum daily for</p> <p>10 45 years, correct?</p> <p>11 A. That is what is reported in her</p> <p>12 deposition.</p> <p>13 Q. Do you have any more specifics</p> <p>14 of how it was that Ms. Judkins claimed to</p> <p>15 have applied talcum powder to her body?</p> <p>16 A. I can't recall whether she put</p> <p>17 it in her underwear or on a pad or directly</p> <p>18 on.</p> <p>19 She says in her deposition on</p> <p>20 page 18, what was -- she was asked: What was</p> <p>21 your routine in terms of during the day when</p> <p>22 you would use Johnson's Baby Powder?</p> <p>23 I used it every time I got out</p> <p>24 of the shower.</p> <p>25 And then I believe she was</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 586</p> <p>1 physically active, and so she was doing some 2 sports and she showered twice a day, she used 3 it twice a day. 4 Q. As in the other cases, your 5 methodology is to believe the testimony of 6 the plaintiffs with respect to their talcum 7 powder use, correct? 8 A. Yes. Again, she was deposed. 9 She was under oath when she gave her 10 deposition, as was, I think, her husband gave 11 a deposition also. So yes. 12 Q. Did Ms. Judkins have a personal 13 history of cancer? 14 A. She did. She had a basal cell 15 skin cancer on her forearm. 16 Q. There's no mention of her talc 17 use in the medical records; is that right? 18 A. No, not to my knowledge. 19 Q. And you did not see anything in 20 the medical records that would evidence a 21 discussion that Ms. Judkins had with her 22 treating physicians about talcum powder use; 23 is that right? 24 A. I did not see anything. 25 Q. Did you do any type of</p>	<p style="text-align: right;">Page 588</p> <p>1 Q. In Ms. Judkins' case, as in 2 each of the cases we've discussed, there's 3 the potential for unknown causes of ovarian 4 cancer. But in your view, talcum powder use 5 is a cause of her ovarian cancer, correct? 6 DR. THOMPSON: Object to form. 7 A. In my view, after review of all 8 her medical records and her depositions and 9 her forms, that talcum powder is a cause of 10 her ovarian cancer -- her talcum powder use. 11 BY MR. ZELLERS: 12 Q. All of the questions that I've 13 asked you in the past as to whether you have 14 individual opinions about asbestos or heavy 15 metals or fragrances that may be contained in 16 the talc, your opinion in this case is not as 17 to those specific ingredients, but it's to 18 the ingredients as a whole, the talc, which, 19 in your opinion, in this case caused 20 Ms. Judkins' ovarian cancer, correct? 21 DR. THOMPSON: Object to form, 22 misstates her testimony. 23 A. So it's the talc which contains 24 or had been found to contain asbestos talc 25 fibers, the heavy metals, nickel, chromium,</p>
<p style="text-align: right;">Page 587</p> <p>1 investigation in terms of whether Ms. Judkins 2 had any exposure or potential exposure to 3 asbestos? 4 DR. THOMPSON: Object to form. 5 A. Again, there was a series of 6 questions in her deposition about what kind 7 of work she did, where did she live, was 8 there construction in her home, was there 9 construction around her house. And there was 10 nothing that indicated to me that she ever 11 had any occupational or long-term exposure to 12 asbestos. 13 BY MR. ZELLERS: 14 Q. I saw some mention in her 15 deposition about Ms. Judkins and her husband, 16 they purchased a house, they were told the 17 house has an issue with asbestos. They may 18 have been in the house for a short period of 19 time before the asbestos was removed. 20 Did you see that? 21 A. Yes. 22 Q. Would that -- or strike that. 23 Does that impact your opinion 24 at all in this case? 25 A. No.</p>	<p style="text-align: right;">Page 589</p> <p>1 cobalt that we've talked about, and some 2 irritating fragrance ingredients. 3 BY MR. ZELLERS: 4 Q. Once again, we have no evidence 5 in Ms. Judkins' case of any samples of the 6 talcum powder she used that you're aware of; 7 is that right? 8 A. I'm not aware that we have any 9 of the samples of her baby powder that she 10 used. 11 Q. You have not communicated or 12 talked with Ms. Judkins; is that right? 13 A. I actually was on a phone call 14 with Ms. Judkins one time. 15 Q. When was that? 16 A. About a year and a half ago. 17 It was sometime deep in the pandemic, so... 18 Q. And for how long did the phone 19 call last? 20 A. It was with attorneys. I don't 21 remember how long the phone call was. Maybe 22 30, 40 minutes. 23 Q. And what was the purpose of the 24 phone call? 25 DR. THOMPSON: And I think that</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 590</p> <p>1 is privileged as to any content of the</p> <p>2 conversation that she had with the</p> <p>3 attorneys and Ms. Judkins.</p> <p>4 MR. ZELLERS: Well, if the</p> <p>5 doctor obtained any information from</p> <p>6 that call that she's relying on, I</p> <p>7 think that would be discoverable,</p> <p>8 so...</p> <p>9 DR. THOMPSON: I disagree.</p> <p>10 MS. GARBER: I think it's all</p> <p>11 privileged.</p> <p>12 DR. THOMPSON: I think I'm</p> <p>13 going to instruct her not to answer</p> <p>14 the content of that discussion.</p> <p>15 MS. GARBER: I think you can</p> <p>16 ask her what she learned from the</p> <p>17 discussion, but I don't think you can</p> <p>18 ask her what was discussed or what she</p> <p>19 gleaned from the conversation.</p> <p>20 DR. THOMPSON: Well, isn't that</p> <p>21 the same thing?</p> <p>22 MS. GARBER: I don't think so.</p> <p>23 MR. ZELLERS: Well, I believe</p> <p>24 that it would be discoverable,</p> <p>25 anything that was communicated to her</p>	<p style="text-align: right;">Page 592</p> <p>1 record.</p> <p>2 (Recess taken, 1:24 p.m. to</p> <p>3 1:27 p.m. CDT)</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. Dr. Wolf, when we broke, you</p> <p>6 were describing a phone conversation that you</p> <p>7 had with the lawyers for Ms. Judkins and with</p> <p>8 Ms. Judkins herself -- was it about a year</p> <p>9 and a half ago you thought --</p> <p>10 A. Yes.</p> <p>11 Q. -- lasted maybe 30 or</p> <p>12 40 minutes?</p> <p>13 Other than the lawyers and</p> <p>14 Ms. Judkins and yourself, was anyone else on</p> <p>15 the call?</p> <p>16 A. Not to my recollection.</p> <p>17 Q. What, if anything, did you</p> <p>18 learn in that call that you're relying on in</p> <p>19 terms of giving your opinions in this case?</p> <p>20 DR. THOMPSON: And I'll object</p> <p>21 to -- I'll object to form, but</p> <p>22 allowing her, obviously, to answer the</p> <p>23 question.</p> <p>24 A. Nothing.</p> <p>25 ///</p>
<p style="text-align: right;">Page 591</p> <p>1 that she relies on in terms of giving</p> <p>2 her opinions, which I think Ms. Garber</p> <p>3 would be -- what you're suggesting,</p> <p>4 what did she learn from that, you</p> <p>5 know, that's relevant to her opinions.</p> <p>6 DR. THOMPSON: Not from what</p> <p>7 she learned from the attorneys or</p> <p>8 their clients, and I'm going to</p> <p>9 instruct her not to answer that</p> <p>10 question.</p> <p>11 MR. ZELLERS: Okay. So I</p> <p>12 disagree. I do think that it should</p> <p>13 be discoverable and is discoverable,</p> <p>14 any information she obtained from that</p> <p>15 phone call --</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. Which in your view lasted 30 or</p> <p>18 40 minutes; is that right?</p> <p>19 A. My recollection.</p> <p>20 MR. ZELLERS: -- that relates</p> <p>21 to her opinions in this case. So --</p> <p>22 DR. THOMPSON: I don't think it</p> <p>23 does. Just a minute, let me consult</p> <p>24 with her.</p> <p>25 MR. ZELLERS: We'll go off the</p>	<p style="text-align: right;">Page 593</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. There were no facts</p> <p>3 communicated to you that you relied upon</p> <p>4 other than, you know, what you looked at in</p> <p>5 the records?</p> <p>6 A. What I already had looked at.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. Do you have or have you at any</p> <p>10 time had any physician-patient relationship</p> <p>11 with Ms. Judkins?</p> <p>12 A. No.</p> <p>13 Q. Other than that one occasion,</p> <p>14 have you ever spoken with Ms. Judkins?</p> <p>15 A. No.</p> <p>16 Q. Have you ever spoken with</p> <p>17 Ms. Judkins' husband?</p> <p>18 A. No.</p> <p>19 Q. Have you ever spoken with any</p> <p>20 of her treating physicians?</p> <p>21 A. Not regarding her care.</p> <p>22 Q. So in what context have you</p> <p>23 spoken with any of her treating physicians?</p> <p>24 A. So her surgeon, Dr. Lloyd West,</p> <p>25 was a fellow of mine about 20 years ago, and</p>

Judith Wolf, M.D.

Page 594	Page 596
<p>1 I've probably seen him socially at meetings 2 once or twice since then. 3 Q. You have never discussed 4 Ms. Judkins' case or care with him; is that 5 right? 6 A. That's correct. 7 Q. Is he aware that you're serving 8 as an expert witness in this case? 9 A. I do not know. 10 Q. Is he aware, from any 11 conversations you've had with him, that 12 you're serving as an expert witness in this 13 case? 14 A. No. 15 Q. You are -- strike that. 16 You have reviewed a report from 17 Dr. Godleski relating to his particle 18 findings in Ms. Judkins' case, correct? 19 A. Yes. 20 Q. Do I understand from your 21 earlier testimony that even without 22 Dr. Godleski's findings, your opinion would 23 still be that Ms. Judkins' talcum powder use 24 was a cause of her ovarian cancer? 25 A. Yes, for the reasons I talked</p>	<p>1 left ovary and left fallopian tube; is that 2 right? 3 And I'm looking at page 3 of 4 Dr. Godleski's report, and specifically at 5 the second paragraph, first sentence of the 6 second paragraph. 7 A. Yes. Yes. 8 Q. Dr. Godleski found -- withdraw 9 that. 10 You're not a surgical 11 pathologist; is that right? 12 A. I'm not a surgical pathologist, 13 but I routinely look at surgical pathology 14 for my patients. 15 Q. All right. Dr. Godleski found 16 932 particles in the tissue blocks. 17 And I'm looking at page 4. 18 A. I see that. 19 Q. Only 17 of those 932 particles 20 were what he reports as nonfibrous talc 21 particles; is that right? 22 A. He reports 17 were talc 23 particles, yes. 24 Q. He describes them, at least at 25 the bottom of page 3, as nonfibrous talc</p>
Page 595	Page 597
<p>1 about before, that I know he only gets a 2 small portion of the tissue to evaluate. 3 Q. I'm going to mark 4 Dr. Godleski's report in Ms. Judkins' case as 5 Deposition Exhibit 48. 6 (Whereupon, Deposition Exhibit 7 Wolf-48, 6/18/21 Godleski Expert 8 Report re: Judkins, was marked for 9 identification.) 10 BY MR. ZELLERS: 11 Q. In your report, you do rely on 12 and reference Dr. Godleski's pathology report 13 in forming your case-specific opinions; is 14 that right? 15 A. Yes. 16 Q. And I see that on page 22, 17 middle of the page. 18 A. I see that. 19 Q. Dr. Godleski looked at eight 20 tissue blocks in Ms. Judkins' case; is that 21 right? 22 A. Yes. 23 Q. Those blocks were from 24 Ms. Judkins' right fallopian tube, right 25 pelvic and paraaortic lymph nodes, cervix,</p>	<p>1 particles? 2 A. Yes. 3 Q. And those were found in only 4 three of the eight blocks he looked at; is 5 that right? 6 A. Yes. 7 DR. THOMPSON: Object to form. 8 BY MR. ZELLERS: 9 Q. 483 of the 932 particles had a 10 calcium composition according to 11 Dr. Godleski; is that right? 12 A. That's right, and that would 13 not be uncommon in ovarian cancer, to find 14 calcium. 15 Q. And that has nothing to do with 16 whether talc is involved or not, correct? 17 A. It's a finding that's common in 18 ovarian cancer. 19 Q. Do you know what kind of 20 particles have a calcium composition? 21 DR. THOMPSON: Object to form. 22 A. Well, many things have a 23 calcium composition. Bone does. Teeth do. 24 Ovarian cancer makes calcium deposits. 25 ///</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 598</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Dr. Godleski also says in his</p> <p>3 report that 272 particles had a variety of</p> <p>4 constituents indicative of exogenous</p> <p>5 material, including 26 nontalc magnesium</p> <p>6 silicate particles, sometimes with other</p> <p>7 cations, and 246 other exogenous particles,</p> <p>8 which included various combinations of metals</p> <p>9 and/or silicon and/or nonmetallic elements,</p> <p>10 page 4, is that right?</p> <p>11 A. I see that, yes.</p> <p>12 Q. You don't know what</p> <p>13 differentiates the 272 exogenous particles</p> <p>14 from the other 246 exogenous particles to</p> <p>15 which Dr. Godleski is referring, do you?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. Well, he describes what the 272</p> <p>18 are, magnesium silicate particles with other</p> <p>19 cations, and the 246 are other exogenous</p> <p>20 particles, including metals, silicon and</p> <p>21 nonmetallic elements. So he's separated them</p> <p>22 based on what they were.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. What are exogenous particles?</p> <p>25 A. Something that comes in from</p>	<p style="text-align: right;">Page 600</p> <p>1 the calcium composition have played a role in</p> <p>2 Ms. Judkins' development of ovarian cancer?</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 A. No, those were felt to be</p> <p>5 endogenous, meaning they came from within her</p> <p>6 body, not from the outside. And as I</p> <p>7 mentioned, it's quite a common thing to see</p> <p>8 calcium deposits in ovarian cancer.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Regardless of the cause,</p> <p>11 correct?</p> <p>12 A. Yes.</p> <p>13 Q. In any of the Dr. Godleski</p> <p>14 records that you have referenced in your</p> <p>15 report, did Dr. Godleski find evidence of</p> <p>16 chronic inflammation around these talc</p> <p>17 particles?</p> <p>18 A. Not to my recollection, but</p> <p>19 I -- that wouldn't be something that would be</p> <p>20 necessarily visible.</p> <p>21 Q. If you're seeing talc particles</p> <p>22 in human tissue, would you expect that they</p> <p>23 would be associated with some type of</p> <p>24 inflammatory response?</p> <p>25 A. Yes, but not necessarily a</p>
<p style="text-align: right;">Page 599</p> <p>1 the outside.</p> <p>2 Q. Okay. In doing your and</p> <p>3 arriving at your case-specific opinions, did</p> <p>4 you do any investigation into trying to</p> <p>5 figure out what these other particles</p> <p>6 actually were?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. Well, he states what a lot of</p> <p>9 them were. Magnesium silicate.</p> <p>10 I don't know what the metals</p> <p>11 were. The metals could be heavy metals that</p> <p>12 had been found in baby powder.</p> <p>13 Silicon, I know what that is.</p> <p>14 The other nonmetallic elements,</p> <p>15 I did not talk to him or ask him what those</p> <p>16 were.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. It does not appear that</p> <p>19 Dr. Godleski, at least in the tissue samples</p> <p>20 that he examined, found either asbestos or</p> <p>21 what you described earlier as talc fibers,</p> <p>22 correct?</p> <p>23 A. No. What he found were talc</p> <p>24 particles.</p> <p>25 Q. Okay. Could the particles or</p>	<p style="text-align: right;">Page 601</p> <p>1 visible inflammatory response. I think</p> <p>2 you're saying would there be white blood</p> <p>3 cells, would there be macrophages? There</p> <p>4 were. There sometimes are and you can see</p> <p>5 those, but because they're not there doesn't</p> <p>6 mean there isn't an inflammatory response.</p> <p>7 Things like cytokines and</p> <p>8 growth factors wouldn't show up on pathology.</p> <p>9 Q. Would there be evidence on a</p> <p>10 pathology slide of an inflammatory response?</p> <p>11 DR. THOMPSON: Objection, asked</p> <p>12 and answered.</p> <p>13 A. I think I just answered that</p> <p>14 question.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. There may be or may not be, is</p> <p>17 that --</p> <p>18 A. You may see white blood cells,</p> <p>19 but with chronic inflammation, you don't need</p> <p>20 to see it. The things that I mentioned,</p> <p>21 growth factors and cytokines, you don't see</p> <p>22 on a pathology slide.</p> <p>23 Q. And for me to try to understand</p> <p>24 your answer, you may see some evidence, but</p> <p>25 you may not, for the reasons you've stated,</p>

Judith Wolf, M.D.

Page 602	Page 604
<p>1 correct?</p> <p>2 A. You may see some white blood</p> <p>3 cells, lymphocytes, macrophages, you may not,</p> <p>4 because chronic inflammation isn't always</p> <p>5 something that's visible on a pathology</p> <p>6 specimen.</p> <p>7 Q. Ms. Judkins was diagnosed with</p> <p>8 her cancer in December of 2016; is that</p> <p>9 right?</p> <p>10 A. Yes.</p> <p>11 Q. She completed her chemotherapy</p> <p>12 in January of 2018; is that right?</p> <p>13 A. She completed in June of 2017.</p> <p>14 Q. All right. So June of 2017,</p> <p>15 she completed her chemotherapy.</p> <p>16 Are you aware of any evidence</p> <p>17 that Ms. Judkins has had a reoccurrence of</p> <p>18 her ovarian cancer?</p> <p>19 A. I am not. When I wrote this</p> <p>20 report anyway, the last records were from</p> <p>21 July of 2020 when she was found to have no</p> <p>22 evidence of disease.</p> <p>23 Q. Have you seen any of her</p> <p>24 treatment records in 2021 that also, at least</p> <p>25 my understanding is, do not indicate a</p>	<p>1 Q. Do you agree that her cancer</p> <p>2 was sporadic?</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 A. No. Sporadic means that you</p> <p>5 don't know any cause of the cancer.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. As we talked earlier, generally</p> <p>8 most ovarian cancers are sporadic, but in</p> <p>9 this case, because of her talcum powder use,</p> <p>10 you do believe that talcum powder use was a</p> <p>11 cause or a contributing cause to her ovarian</p> <p>12 cancer, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. Talcum powder was the cause of</p> <p>15 her cancer. And I'm just going to clarify</p> <p>16 that generally in the literature, sporadic</p> <p>17 versus genetic implies inherited versus</p> <p>18 noninherited; but sporadic really just means</p> <p>19 you don't know the cause.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. And I think we've covered this,</p> <p>22 but in the majority of cases of ovarian</p> <p>23 cancer, the physicians do not know the cause,</p> <p>24 correct?</p> <p>25 A. In the majority of patients</p>
Page 603	Page 605
<p>1 recurrence?</p> <p>2 A. Yeah, I don't -- my</p> <p>3 recollection is I haven't seen anything more</p> <p>4 frequently than that.</p> <p>5 Q. All right. Your last</p> <p>6 records -- and it would be reflected in your</p> <p>7 report -- are --</p> <p>8 A. Was from July 2020.</p> <p>9 Q. Okay. From the records you've</p> <p>10 seen, there's no evidence that Ms. Judkins'</p> <p>11 ovarian cancer metastasized; is that right?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. Her ovarian cancer has not</p> <p>14 recurred. At the time of diagnosis, it was</p> <p>15 already felt to have been metastasized to her</p> <p>16 colon. That's why she was a stage 2, the</p> <p>17 outside of her colon. And at the time of the</p> <p>18 last record that I saw, she has had no</p> <p>19 recurrence.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. It appears that she's doing</p> <p>22 well, from at least the records and materials</p> <p>23 that you've seen and you've reviewed?</p> <p>24 A. Thus far, she's free of</p> <p>25 disease.</p>	<p>1 with ovarian cancer, there's not an inherited</p> <p>2 mutation that is the cause.</p> <p>3 Q. So do you agree with me -- I</p> <p>4 mean, is that a yes with an explanation?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. I don't agree with you. I</p> <p>7 agree with the statement that I said, that in</p> <p>8 the majority of cases, there is not an</p> <p>9 inherited genetic mutation.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. And if there is not an</p> <p>12 inherited genetic mutation, those cases,</p> <p>13 other than perhaps a small number of talc</p> <p>14 cases, would be sporadic, correct?</p> <p>15 DR. THOMPSON: Object to form.</p> <p>16 A. So in the cases that are not</p> <p>17 inherited, those are -- those in the</p> <p>18 literature are considered sporadic. In the</p> <p>19 sporadic, meaning the noninherited, sometimes</p> <p>20 you can identify a cause. Sometimes you can</p> <p>21 identify things that -- multiple things that</p> <p>22 may be -- that can be a cause of their</p> <p>23 cancer.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Do most women with epithelial</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 606</p> <p>1 ovarian cancer fit the profile of Ms. Judkins</p> <p>2 in terms of age at diagnosis, high-grade</p> <p>3 serous? And is she in the group of patients</p> <p>4 that you most commonly see that are diagnosed</p> <p>5 with ovarian cancer?</p> <p>6 A. So there are some things about</p> <p>7 her case that are common and some that are a</p> <p>8 little outside of common. She has -- as we</p> <p>9 talked about, she's slightly younger, but not</p> <p>10 far off the average age. The high-grade</p> <p>11 serous is common.</p> <p>12 The fact that she was found at</p> <p>13 stage 2B is not that common. 75% of women</p> <p>14 are found at stage 3 or 4.</p> <p>15 The fact that her treatment</p> <p>16 included intraperitoneal chemotherapy is not</p> <p>17 common. There aren't very many women who are</p> <p>18 able to tolerate that therapy, and there</p> <p>19 aren't that many people who are good</p> <p>20 candidates for it because of their disease.</p> <p>21 Q. Given when her cancer was</p> <p>22 diagnosed, the stage, the treatment that she</p> <p>23 was able to receive, her course after the</p> <p>24 treatment, do you believe that Ms. Judkins</p> <p>25 has a good prognosis?</p>	<p style="text-align: right;">Page 608</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. That's a risk that any woman</p> <p>3 with ovarian cancer has, correct?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. That their cancer will recur?</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. May recur.</p> <p>8 A. That their cancer may recur,</p> <p>9 yes.</p> <p>10 Q. Yes. There's nothing unusual</p> <p>11 about Ms. Judkins' case that would cause you</p> <p>12 to think it's more likely that her cancer</p> <p>13 would recur; is that right?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. I don't think I said that.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. If anything, there would be a</p> <p>18 risk that it may recur, less of a risk just</p> <p>19 because of the relatively early stage it was</p> <p>20 diagnosed and the treatment that she's</p> <p>21 undergone?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. Well, I hope. I hope.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. All right. I want to ask you</p>
<p style="text-align: right;">Page 607</p> <p>1 DR. THOMPSON: Object to form.</p> <p>2 A. I believe that she's done well</p> <p>3 so far; that she still has a chance that her</p> <p>4 cancer will come back. She had the best</p> <p>5 opportunity to do as well as she could. She</p> <p>6 had relatively early stage, 2B, instead of 3</p> <p>7 or 4. She had an aggressive surgery where</p> <p>8 all the visible cancer was removed, and she</p> <p>9 had the most aggressive therapy that we had</p> <p>10 at the time in 2017. I would not consider</p> <p>11 her cured.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. While there's always a risk of</p> <p>14 recurrence, it sounds that your opinion is</p> <p>15 she has a good prognosis, but you would not</p> <p>16 say that she's cured, and there's always the</p> <p>17 possibility of a reoccurrence; is that fair?</p> <p>18 DR. THOMPSON: Object to form,</p> <p>19 misstates the testimony.</p> <p>20 A. I think that she's had</p> <p>21 everything done that she possibly could to</p> <p>22 have the best prognosis that she possibly</p> <p>23 could. I'm still concerned that her cancer</p> <p>24 will recur, and if her cancer recurs, she</p> <p>25 will likely die from it.</p>	<p style="text-align: right;">Page 609</p> <p>1 some questions about the Swann case now.</p> <p>2 A. Okay.</p> <p>3 Q. Do we want to take a break or</p> <p>4 just go right in?</p> <p>5 DR. THOMPSON: Do you</p> <p>6 anticipate Swann taking about the same</p> <p>7 amount of time? Shall we take a break</p> <p>8 and then finish Swann?</p> <p>9 MR. ZELLERS: No, that's --</p> <p>10 it's up to you.</p> <p>11 DR. THOMPSON: I'd rather -- I</p> <p>12 think you'd rather not take a break in</p> <p>13 the middle of Swann, right?</p> <p>14 MR. ZELLERS: Yeah, I'd rather</p> <p>15 not take a break in the middle of</p> <p>16 Swann.</p> <p>17 DR. THOMPSON: So let's take</p> <p>18 five minutes now.</p> <p>19 (Recess taken, 1:47 p.m. to</p> <p>20 1:56 p.m. CDT)</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Dr. Wolf, you have also</p> <p>23 prepared a case-specific report in the Swann</p> <p>24 case; is that right?</p> <p>25 A. Yes.</p>



Judith Wolf, M.D.

Page 610	Page 612
<p>1 Q. As with your other 2 case-specific reports, the first 21 pages of 3 your report on Ms. Swann is the same as the 4 general amended report in the MDL that we 5 have discussed earlier in this deposition; is 6 that right? 7 A. That's correct. 8 Q. Are all of the case-specific 9 opinions that you anticipate testifying to at 10 any trial or hearing in the Swann matter set 11 forth in your case-specific report that we 12 have marked as Exhibit 9 to this deposition? 13 A. Yes. 14 Q. It's your opinion that talcum 15 powder was a cause of Ms. Swann's ovarian 16 cancer, correct? 17 A. Yes. 18 Q. If she had never used talc, she 19 never would have gotten ovarian cancer; is 20 that your opinion? 21 DR. THOMPSON: Object to form. 22 MS. GARBER: Object to the 23 form. 24 A. So my opinion is that her talc 25 use is a cause of her cancer. There are</p>	<p>1 lack of risk factors, if she had not used 2 talc. 3 BY MR. ZELLERS: 4 Q. It is possible that had she not 5 used talc, she still would have developed 6 ovarian cancer. That's a possibility, 7 correct? 8 MS. GARBER: Object to the 9 form. 10 A. Anything is possible. 11 BY MR. ZELLERS: 12 Q. And if I ask you that question 13 with Ms. Bondurant or Ms. Gallardo or 14 Ms. Judkins, it's the same response. Even if 15 they had not used talc, it's possible that 16 they would have developed ovarian cancer, 17 correct? 18 MS. GARBER: Object to the 19 form. 20 A. With Ms. Swann and all the 21 other patients that I've testified today, I 22 think the chances of them getting ovarian 23 cancer had they not used talc is highly 24 unlikely. 25 ///</p>
Page 611	Page 613
<p>1 women who get ovarian cancer who have not 2 used talc, do not have an inherited mutation, 3 do not have any obvious causative risk 4 factor, but she does, and she used talcum 5 powder for 40 years according to her doctor's 6 deposition. 7 BY MR. ZELLERS: 8 Q. Even if -- well, strike that. 9 If Ms. Swann had never used 10 talc, she still may have developed ovarian 11 cancer, correct? 12 MS. GARBER: Object to the 13 form. 14 A. Ms. Swann did use talc. 15 BY MR. ZELLERS: 16 Q. I understand. 17 A. So I'm -- 18 Q. I'm asking you hypothetically, 19 had she not used talc, she still may have 20 developed ovarian cancer, correct? 21 MS. GARBER: Object to the 22 form. 23 A. Ms. Swann's chances of 24 developing ovarian cancer if she had not used 25 talc I believe would be quite low given her</p>	<p>1 BY MR. ZELLERS: 2 Q. How old was Ms. Swann when she 3 was diagnosed with ovarian cancer? 4 A. 62. 5 Q. Could Ms. Swann's age have 6 caused her ovarian cancer? 7 A. So she's right at the average 8 age. So if we look at age being a risk 9 factor, think about 62-63 being sort of the 10 1, if we were looking at a relative risk, and 11 someone under that age it would be less than 12 1, and someone over that age it would be 13 greater than 1. So it's sort of a neutral 14 piece of information in her case. 15 Q. But you agree that her age 16 would increase her risk for more mutations, 17 correct? 18 A. The longer anyone lives, they 19 can get more mutations anywhere on their 20 body. 21 Q. Do you agree that Ms. Swann's 22 family history of cancer played a role in her 23 development of ovarian cancer? 24 A. Ms. Swann's family history was 25 a little confusing to me because it was quite</p>

47 (Pages 610 to 613)

Judith Wolf, M.D.

Page 614	Page 616
<p>1 inconsistent in her records. My recollection 2 is that she had a paternal grandmother who 3 had some type of cancer, not clear what type, 4 and then Dr. Miriani, and I don't remember 5 what -- which doctor Dr. Miriani was for 6 Ms. Swann -- describes a family history of 7 ovarian cancer, but doesn't give details. 8 So I'm not sure what the family 9 history was in her case. 10 Q. You set forth in your report on 11 page 21 that Dr. Miriani describes a family 12 history of ovarian cancer, correct? 13 A. I just said that. 14 Q. So that's a yes; is that right? 15 DR. THOMPSON: Object to form. 16 A. Yes, a history without details 17 of who had ovarian cancer. 18 BY MR. ZELLERS: 19 Q. Are you aware that Dr. Miriani 20 and Dr. Elbendary records indicate that 21 Ms. Swann had a grandmother with ovarian 22 cancer? 23 A. My recollection is I didn't -- 24 couldn't figure out who had ovarian cancer, 25 but there was a paternal grandmother who had</p>	<p>1 wasn't clear who had it. And there was 2 another place that said it was a paternal 3 grandmother who's had some type of cancer. 4 So I'm not entirely clear who 5 had the cancer. 6 BY MR. ZELLERS: 7 Q. What records are you aware of 8 that contradict that Ms. Swann's grandmother 9 had ovarian cancer? 10 DR. THOMPSON: Object to form. 11 A. Well -- 12 BY MR. ZELLERS: 13 Q. Or Ms. -- 14 A. I don't have all of her 15 records. 16 MR. ZELLERS: Did I misstate my 17 question? 18 BY MR. ZELLERS: 19 Q. Let me ask my question again in 20 case I misspoke. 21 Can you identify any records of 22 Ms. Swann that contradict that her 23 grandmother had ovarian cancer as appears to 24 be the case from the history provided on 25 Deposition Exhibit 49?</p>
Page 615	Page 617
<p>1 some type of cancer that somebody reported. 2 Q. Let's mark as Deposition 3 Exhibit 49 a page from Ms. Swann's medical 4 records. 5 (Whereupon, Deposition Exhibit 6 Wolf-49, Medical Record(s), 7 SWANNV_MBMCMC_0034, was marked for 8 identification.) 9 BY MR. ZELLERS: 10 Q. This is a record from Missouri 11 Baptist Medical Center; is that right? 12 A. Yes. 13 Q. And under Family History, it 14 states: Grandmother had ovarian cancer. 15 A. I see that. 16 Q. Is that right? 17 A. Yes. 18 Q. Does that help clarify who it 19 was in the family that had ovarian cancer? 20 DR. THOMPSON: Object to form. 21 A. This is one place that it says 22 that, but I'm telling you that other places 23 it was not consistent. So I still feel like 24 somebody had ovarian cancer. This record 25 says it was a grandmother. Other places it</p>	<p>1 DR. THOMPSON: Objection, and 2 she's already described some of the 3 contradictory -- 4 MR. ZELLERS: Well, I -- with 5 all due respect -- 6 DR. THOMPSON: Well, you asked 7 me, did you not? 8 BY MR. ZELLERS: 9 Q. All I'm trying to find out, 10 because I don't think I have an answer, are 11 there any specific records that you can 12 direct me to, Dr. Wolf, that contradict that 13 Ms. Swann's grandmother had ovarian cancer? 14 DR. THOMPSON: Object to form. 15 A. So the records -- I don't have 16 all of her records in front of me, but when I 17 reviewed her records, it was unclear to me 18 what her family history was. 19 As her family history reported, 20 and I believe this was -- I'm not sure, I 21 don't say who it was from -- but a paternal 22 grandmother had some type of cancer, and that 23 may have been from her daughter's deposition. 24 And Dr. Miriani's records 25 describe somebody in the family as having</p>

48 (Pages 614 to 617)

Judith Wolf, M.D.

<p style="text-align: right;">Page 618</p> <p>1 ovarian cancer, but I don't know who that is.  2 BY MR. ZELLERS:  3 Q. All right. It's important to  4 pin down the history to determine whether or  5 not the family history is a risk factor in a  6 given patient's case, correct?  7 A. And --  8 Q. Is that correct?  9 A. It is. And I found it  10 difficult to pin down her family history in  11 reviewing her records.  12 Q. All right. Ms. Swann reported  13 in her deposition that she had a paternal  14 aunt with breast cancer, correct?  15 A. Paternal grandmother.  16 MR. ZELLERS: Would you mark  17 this as Deposition Exhibit 50?  18 (Whereupon, Deposition Exhibit  19 Wolf-50, Excerpt from Lydia Huston  20 Deposition, was marked for  21 identification.)  22 BY MR. ZELLERS:  23 Q. I've handed you what we've  24 marked as Deposition Exhibit 50. It is some  25 excerpts from the deposition of Lydia Huston.</p>	<p style="text-align: right;">Page 620</p> <p>1 A. So Lydia Houston is her  2 daughter, is Ms. Swann's daughter, correct?  3 Q. Yes.  4 A. And what's your question?  5 Q. My question is: Does this help  6 refresh your recollection or provide  7 information that Ms. Swann had a paternal  8 Aunt with breast cancer?  9 A. This makes it seem like it  10 was -- so this is her -- this is her daughter  11 talking. My grandfather died...  12 (Sotto voce document review by  13 the witness.)  14 A. So those are from her father's  15 side, not Ms. Swann's side, if I'm reading  16 this correctly.  17 This is Ms. Swann's daughter,  18 Ms. Huston, and the question is about her  19 father and his family, and these are the  20 biological father's parents and his children.  21 So these would be on  22 Ms. Swann's father's side, not Ms. Swann's  23 side. Yes?  24 BY MR. ZELLERS:  25 Q. This is Ms. Huston.</p>
<p style="text-align: right;">Page 619</p> <p>1 At the very bottom of the page,  2 so page 13 -- the first page of the  3 exhibit --  4 A. Yeah, I see page 13.  5 Q. -- but page 13 in the box, the  6 very last line, line 25.  7 QUESTION: Okay. Did your  8 father have siblings? Your biological  9 father?  10 Yes.  11 QUESTION: Do you know their  12 names?  13 I do.  14 And then she gives a number of  15 names.  16 Then if we go down to page 15,  17 question starting at line 9: Okay. Are Mae,  18 Minnie, Flora, Virgie, Annise and Annette  19 still living?  20 ANSWER: No. Mae Francis is  21 deceased and Annette is deceased.  22 QUESTION: Do you know what  23 their causes of death were?  24 ANSWER: Breast cancer for both  25 of them.</p>	<p style="text-align: right;">Page 621</p> <p>1 A. Ms. Swann's daughter?  2 Q. Yes.  3 A. And she's being asked about her  4 biological father and her biological father's  5 parents and their family history.  6 So this is all family history  7 that has no blood relationship to Ms. Swann.  8 Q. I have another deposition  9 excerpt here, so let me -- I will clear that  10 up. And then if I have some additional  11 questions before we stop here, I will ask  12 them of you.  13 A. Okay.  14 Q. Did you see any notation in the  15 records that Ms. Swann's mother died at a  16 young age?  17 A. I don't recall that. I don't  18 know if there's something more in this about  19 her mother, her maternal grandmother.  20 MR. ZELLERS: Let's take a  21 break if we can. I need five minutes  22 and then we'll continue.  23 DR. THOMPSON: Okay. Sure.  24 (Recess taken, 2:10 p.m. to  25 2:21 p.m. CDT)</p>

Judith Wolf, M.D.

Page 622	Page 624
<p>1 BY MR. ZELLERS: 2 Q. Take a look at the deposition, 3 and on block 14 -- or page 14 -- 4 A. Uh-huh. 5 Q. -- Ms. Huston is asked about 6 the names of her mother's parents; is that 7 right? 8 A. Yes. 9 Q. And she gives the name of her 10 mother's father and her mother's -- and her 11 grandmother or Ms. Swann's mother. They are 12 both deceased. 13 She's asked what the cause of 14 death for Ms. Swann's parents was and she 15 states that Ms. Swann's mother died of an 16 accidental gunshot wound in 1957; is that 17 right? 18 A. Yes. 19 Q. One factor when you're looking 20 at family history is whether or not a parent, 21 in this case, a mother, develops cancer, 22 right? That would be one thing you'd look at 23 in a family history? 24 A. Yes. 25 Q. And here, because Ms. Swann's</p>	<p>1 not a family history is a risk factor for 2 ovarian cancer is whether the patient's 3 mother developed ovarian cancer, breast 4 cancer or any other form of cancer, correct? 5 A. That's correct. 6 Q. Okay. 7 A. And to the time of her mother's 8 death, she had not developed any cancers. 9 Q. And here we just don't have any 10 information beyond, obviously -- 11 A. Her death. 12 Q. -- the time that she passed 13 away? 14 A. That's correct. 15 Q. Ms. Swann did not undergo any 16 genetic testing; is that right? 17 A. So I do -- I have not seen a 18 report. According to her daughter's 19 deposition, she had a negative BRCA test 20 based on a home saliva test. 21 Q. And what does that mean? 22 A. That she had a testing done on 23 her saliva. 24 Q. And where did you obtain that 25 information?</p>
Page 623	Page 625
<p>1 mother died at a relatively young age, you 2 just don't know whether she would have 3 developed ovarian cancer, breast cancer or 4 any other form of cancer, correct? 5 DR. THOMPSON: Object to form. 6 A. So I'm not sure how old she was 7 when she died, although Ms. Swann was born in 8 '49, so she was -- I don't know how old she 9 was then. 10 BY MR. ZELLERS: 11 Q. Ms. Swann was born in '49 and 12 her mother died in '57? 13 A. '57. 14 Q. Ms. Swann's mother would have 15 died when she was about eight years old; is 16 that right? 17 A. When Ms. Swann was eight years 18 old. 19 Q. When Ms. Swann was eight years 20 old. 21 A. What we don't know is how old 22 was her mother when she had her. 23 Q. My question to you just 24 generally is: One thing that you look at in 25 evaluating a case and evaluating whether or</p>	<p>1 A. The daughter's deposition. 2 Q. Do you have a reference at all? 3 A. I don't have one. No, I don't 4 have the whole deposition in front of me. I 5 don't remember where it was. 6 Q. Is a saliva test the way that a 7 BRCA test is generally done? 8 A. Sometimes. 9 Q. Is it accurate, that type of 10 test? 11 A. It can be, yeah. 12 Q. Is it -- strike that. 13 What's the typical way that a 14 BRCA genetic test is done? 15 A. Usually a blood test, but I've 16 had some patients who have had saliva tests. 17 Q. Do you know whether or not a 18 BRCA saliva test is less accurate than a BRCA 19 blood test? 20 A. Not that I'm aware. I don't 21 know that much about -- first of all, I don't 22 know what saliva test she had, so I can't 23 give you any more information about her test 24 than is in there, in this report. 25 I know that more recently more</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 626</p> <p>1 people are getting tests done by saliva than 2 blood as the genetic testing has become more 3 sophisticated and able to look at mutations 4 in saliva as well as blood. 5 Q. All right. You have not seen 6 any test result; is that right? 7 A. I have not. 8 Q. What you saw was a reference in 9 Ms. Huston's deposition that her mother had a 10 BRCA saliva test and that it was negative? 11 A. That's correct. 12 Q. Do you know when she had that 13 test? 14 A. No. 15 Q. Do you agree that Ms. Swann 16 could have had an inherited germline mutation 17 given her family history of ovarian cancer 18 and breast cancer? 19 MS. GARBER: Object to the 20 form. 21 DR. THOMPSON: Object to form. 22 A. So given that the -- there's 23 one reference that her paternal grandmother 24 had ovarian cancer. That is the only family 25 member I know for sure had any type of cancer</p>	<p style="text-align: right;">Page 628</p> <p>1 that family history was a cause of her 2 ovarian cancer or that her family history put 3 her at increased risk. 4 Q. Because the information we have 5 from the record we looked at is that 6 Ms. Swann had a grandmother with ovarian 7 cancer, that's not enough for you to believe 8 that it would be likely that Ms. Swann could 9 have an inherited germline mutation, correct? 10 A. That one family history I do 11 not believe puts her at higher risk for 12 having a germline mutation. 13 Q. Did you make any request for 14 the BRCA test or some documentation or some 15 verification of that? 16 A. I've asked the attorneys 17 several times if there were any more records, 18 if there's anything else that we could get, 19 and I have not received anything else. 20 Q. Much like in one of the earlier 21 cases where you would want to see a surgical 22 report verifying endometriosis for you to 23 rely upon there being a negative BRCA test, 24 you'd want to see the test results or the 25 report and have a better understanding of how</p>
<p style="text-align: right;">Page 627</p> <p>1 that would be related to a genetic mutation. 2 It's hard for me to put much weight on that 3 as a cause for a family history. 4 That in itself would not make 5 me raise issues that I would consider a 6 family history of -- suggesting a genetic 7 mutation, inherited genetic mutation. 8 BY MR. ZELLERS: 9 Q. Is family history a risk factor 10 for Ms. Swann? 11 MS. GARBER: Object to the 12 form. 13 A. Family history of a 14 first-degree relative of ovarian cancer or 15 two or more family members with breast cancer 16 or premenopausal -- one with premenopausal 17 cancer would be, but a paternal grandmother 18 would not be a first-degree relative. 19 BY MR. ZELLERS: 20 Q. So because it's not a 21 first-degree relative, you do not believe 22 that, in Ms. Swann's case, family history was 23 either a risk factor for her ovarian cancer 24 or a cause of her ovarian cancer, correct? 25 A. I have no evidence to support</p>	<p style="text-align: right;">Page 629</p> <p>1 it was done? 2 DR. THOMPSON: Object to form. 3 A. In this case, what I have is 4 her daughter under oath stating that she had 5 a record that -- I think there was a BRCA 6 test. To me, those two things are different. 7 I have no reason to suspect that her daughter 8 made this up. 9 BY MR. ZELLERS: 10 Q. Well, back in the case that we 11 talked about earlier in your deposition where 12 the patient gave a history of having 13 endometriosis diagnosed, you'd have no 14 suggestion or indication that the patient in 15 that case was making that up, would you? 16 DR. THOMPSON: Object to form. 17 MS. GARBER: Object to the 18 form. 19 A. I never suggested the patient 20 was making it up. I'm saying there was no 21 evidence in her history that she ever had a 22 diagnosis of endometriosis, which is made via 23 surgical -- surgical -- looking surgically. 24 BY MR. ZELLERS: 25 Q. Well, there was evidence in her</p>



Judith Wolf, M.D.

<p style="text-align: right;">Page 630</p> <p>1 case and in her history that she gave -- we 2 saw that in multiple records -- that she told 3 physicians that she had had a diagnosis of 4 endometriosis, correct? 5 DR. THOMPSON: Object to form. 6 MS. GARBER: Object to the 7 form. 8 A. To have a confirmed diagnosis 9 of endometriosis, it has to be surgically 10 confirmed, and she had no -- nothing in her 11 history where she had surgery to confirm that 12 she had endometriosis. 13 BY MR. ZELLERS: 14 Q. Well, similarly, in Ms. Swann's 15 case, to have, you know, evidence of there 16 being a negative BRCA test -- in Ms. Swann's 17 case, in order for there to be evidence of a 18 negative BRCA test, you'd need to see the 19 test, right? 20 DR. THOMPSON: Object to form. 21 A. Those are two different things. 22 You can't have a diagnosis of endometriosis, 23 a confirmed diagnosis, without having a 24 surgical confirmation that there is 25 endometriosis.</p>	<p style="text-align: right;">Page 632</p> <p>1 reported in the deposition was from age 20 to 2 60, so 40 years, daily or sometimes twice a 3 day. So 40 years, 12,000 times. 4 And the duration and frequency 5 of her use is consistent with the support 6 found in the epidemiologic studies that that 7 duration and frequency of use of powder 8 increases and can cause ovarian cancer. 9 BY MR. ZELLERS: 10 Q. Similar to the other cases 11 we've talked about, there was enough exposure 12 in Ms. Swann's case for you to conclude that 13 talcum powder was a cause of ovarian cancer, 14 correct? 15 A. Yes. 16 Q. You did not attempt to quantify 17 the exact amount and that would be virtually 18 impossible for anybody to do, correct? 19 DR. THOMPSON: Object to form. 20 A. I -- I quantified the presumed 21 number of times she used it. The amount she 22 used in each shake, I don't know, but her 23 history and the usage that she gives is 24 supported in the epidemiologic literature as 25 a risk factor for ovarian cancer development.</p>
<p style="text-align: right;">Page 631</p> <p>1 If someone tells me that her 2 mother had BRCA testing and it was negative, 3 I don't need surgical confirmation for that. 4 BY MR. ZELLERS: 5 Q. Do we know if the BRCA testing 6 was BRCA1, BRCA2? 7 A. The information that I have is 8 what I put in my report, that she had a 9 BRCA-based home saliva test. 10 Q. But we don't know when, 11 correct, and we don't know who has done that? 12 You've requested the records, but at least as 13 of now, we don't have the records? 14 A. The information I have is what 15 I put in my report. 16 Q. Do you believe that the route 17 of talcum powder exposure in Ms. Swann's case 18 was through migration? 19 A. I do. 20 Q. Did you make an attempt to 21 determine how much talc Ms. Swann was exposed 22 to over the time period that she claims to 23 have used talc? 24 DR. THOMPSON: Object to form. 25 A. So the use that her daughter</p>	<p style="text-align: right;">Page 633</p> <p>1 BY MR. ZELLERS: 2 Q. In forming your opinion on 3 Ms. Swann, you relied on the testimony of her 4 daughter that she used it daily, in her 5 genital area and underwear two times a day; 6 is that right? 7 A. At least daily, and sometimes 8 twice a day. 9 Q. You don't have any more 10 specifics of how it was that Ms. Swann 11 applied or used talcum powder to her body 12 other than the testimony of her daughter; is 13 that right? 14 A. Yes. 15 Q. Ms. Swann had a tubal ligation 16 in 1985, correct? 17 A. Yes. Yes. 18 Q. That would reduce, at least in 19 your opinion, Ms. Swann's talc exposure and 20 thereby reduce her risk of ovarian cancer, 21 correct? 22 A. It would still give her 23 15 years of use, which would be adequate in 24 duration and frequency. 25 Q. Her only exposure to talc use</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 634</p> <p>1 that you believe would be relevant in terms 2 of being a cause of ovarian cancer would be 3 the use prior to 1985; is that right? 4 DR. THOMPSON: Object to form. 5 A. That's when her tract would be 6 open and the talcum powder could get to her 7 ovaries, yes. 8 BY MR. ZELLERS: 9 Q. In your report, you rely on 10 Dr. Godleski's pathology report in forming 11 your case-specific opinions; is that right? 12 A. Yes. 13 Q. Dr. Godleski looked at tissue 14 blocks in Ms. Swann's case. 15 I'll provide you with 16 Dr. Godleski's report. 17 A. Thank you. 18 Q. We'll mark it as Exhibit 51. 19 (Whereupon, Deposition Exhibit 20 Wolf-51, 4/18/19 Godleski Expert 21 Report re: Swann, was marked for 22 identification.) 23 BY MR. ZELLERS: 24 Q. You have Dr. Godleski's report 25 in front of you; is that right?</p>	<p style="text-align: right;">Page 636</p> <p>1 talc, yes. 2 Q. The two talc particles found in 3 the tissues were in blocks C5 from the left 4 ovary and F1 from the right pelvic lymph 5 node; is that right? 6 A. Yes. 7 Q. So as I understand 8 Dr. Godleski's report, only two of the 324 9 foreign particles he found were talc, 10 correct? 11 A. Two particles were talc, yes. 12 Q. Two out of the 324 foreign 13 particles? 14 A. Yes. 15 Q. Do you have any idea as to how 16 those other 322 foreign particles came to be 17 in Ms. Swann's body? 18 A. They came in from the outside, 19 like the talc. 20 Q. You believe that those foreign 21 particles would have traveled up the genital 22 tract into the ovaries and fallopian tubes 23 and pelvic lymph node, correct? 24 A. I believe they could have, yes. 25 Q. Do you have any idea what the</p>
<p style="text-align: right;">Page 635</p> <p>1 A. I do. 2 Q. The tissue blocks that 3 Dr. Godleski looked at in Ms. Swann's case, 4 they were from her right and left ovaries, 5 right fallopian tubes and right pelvic lymph 6 node; is that right? 7 A. So right and left ovaries and 8 fallopian tubes, so both tubes, I believe. 9 Q. Looking at page 2 -- 10 A. That's where I'm looking also. 11 Are you at the top of the page or -- 12 Q. Top of the page. 13 A. Yeah. The right and left 14 ovaries and fallopian tubes, so I assume that 15 means both tubes, and right pelvic lymph 16 node. 17 Q. Dr. Godleski found 929 18 particles in the tissue blocks, page 4? 19 A. Yes. 20 Q. Of the 929 particles that he 21 found, 324 particles had a variety of foreign 22 particles; is that right? And I'm looking at 23 page 4. 24 A. A variety of constituents 25 indicative of foreign particles, including</p>	<p style="text-align: right;">Page 637</p> <p>1 other 322 foreign particles might be? 2 A. He doesn't give any description 3 about what they were, other than nine other 4 magnesium and silicon particles that were not 5 talc. 6 Q. So in forming your 7 case-specific opinion here regarding 8 Ms. Swann, you didn't do any investigation 9 into trying to figure out what those other 10 foreign particles were; is that correct? 11 A. I did not. 12 Q. Could the other foreign 13 particles have played a role in Ms. Swann's 14 development of ovarian cancer? 15 MS. GARBER: Object to the 16 form. 17 DR. THOMPSON: Object to form. 18 A. I don't know what the other 19 particles were, and I'm not aware of other 20 foreign particles that are not talc or 21 asbestos or known carcinogens that have been 22 associated with increased risk of ovarian 23 cancer. 24 BY MR. ZELLERS: 25 Q. Of the 929 particles in the</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 638</p> <p>1 tissue blocks, 605 particles were endogenous</p> <p>2 to the tissues, correct?</p> <p>3 A. Yes.</p> <p>4 Q. What does endogenous to the</p> <p>5 tissues mean?</p> <p>6 A. Meaning it comes from within</p> <p>7 the body.</p> <p>8 Q. Do you have any idea what role</p> <p>9 these endogenous particles might have played</p> <p>10 in the development of Ms. Swann's ovarian</p> <p>11 cancer?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. He lists the endogenous</p> <p>14 particles composed of calcium, iron, carbon,</p> <p>15 sodium, potassium and phosphorus. None of</p> <p>16 those things cause ovarian cancer.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. In any of Dr. Godleski's</p> <p>19 records which you've referenced in your</p> <p>20 report, did Dr. Godleski find evidence of</p> <p>21 chronic inflammation around these talc</p> <p>22 particles?</p> <p>23 A. I'm just looking at his</p> <p>24 histologic...</p> <p>25 (Document review.)</p>	<p style="text-align: right;">Page 640</p> <p>1 everything else in Ms. Swann's case that you</p> <p>2 reviewed, your opinion would be the same,</p> <p>3 correct; that her talcum powder use was a</p> <p>4 cause of her ovarian cancer?</p> <p>5 A. As I've said in the other</p> <p>6 cases, this is supportive of talcum powder</p> <p>7 being the case, but not required -- being a</p> <p>8 cause of her cancer, but not required.</p> <p>9 Q. Without Dr. Godleski's report,</p> <p>10 would your opinion in Ms. Swann's case be the</p> <p>11 same?</p> <p>12 A. Ms. Swann had significant --</p> <p>13 sufficient use of talcum powder that whether</p> <p>14 Dr. Godleski saw fibers or particles in her</p> <p>15 tissue or not would not change my opinion.</p> <p>16 Q. Are you familiar with an</p> <p>17 article by Schildkraut in 2021? Davis and</p> <p>18 Schildkraut are the authors.</p> <p>19 A. Yes.</p> <p>20 Q. Let's mark that as Deposition</p> <p>21 Exhibit 52.</p> <p>22 (Whereupon, Deposition Exhibit</p> <p>23 Wolf-52, Genital Powder Use and Risk</p> <p>24 for Ovarian Cancer... by Davis et al,</p> <p>25 was marked for identification.)</p>
<p style="text-align: right;">Page 639</p> <p>1 A. He did not see any lymphocytes</p> <p>2 or macrophages or any other white blood</p> <p>3 cells, but as I said before, chronic</p> <p>4 inflammation is not something that's</p> <p>5 necessarily going to show up in pathology.</p> <p>6 Cytokines, growth factors don't show up on</p> <p>7 pathology slides.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. As we've talked in some of the</p> <p>10 other cases, you may or may not see a chronic</p> <p>11 inflammatory response around particles,</p> <p>12 correct?</p> <p>13 A. You don't -- you don't have to</p> <p>14 see it for there to be chronic inflammation.</p> <p>15 Q. My question though is: You may</p> <p>16 see chronic inflammation as part of a</p> <p>17 pathology slide, but you may not for the</p> <p>18 reasons that you've told us in this</p> <p>19 deposition?</p> <p>20 A. You may see lymphocytes or</p> <p>21 macrophages, which can be a sign of chronic</p> <p>22 inflammation, but not seeing them does not</p> <p>23 mean there's not chronic inflammation.</p> <p>24 Q. Hypothetically, had you not</p> <p>25 seen Dr. Godleski's report, based upon</p>	<p style="text-align: right;">Page 641</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. You're familiar with the</p> <p>3 Schildkraut meta-analysis that's set forth in</p> <p>4 this paper; is that right?</p> <p>5 A. Yes.</p> <p>6 Q. You rely on it for your opinion</p> <p>7 that there is a dose-response, and go to your</p> <p>8 amended report, page 18; is that right?</p> <p>9 A. I considered it in my opinion.</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. Are you aware that one of the</p> <p>13 things --</p> <p>14 DR. THOMPSON: I'm sorry. Can</p> <p>15 I just have a second to go to that</p> <p>16 part of her report, because it --</p> <p>17 MS. GARBER: Where did you say</p> <p>18 you were?</p> <p>19 DR. THOMPSON: I just want to</p> <p>20 make sure it's the same Schildkraut</p> <p>21 study that you're referring to. I</p> <p>22 think it probably is not.</p> <p>23 MR. ZELLERS: It probably is</p> <p>24 not?</p> <p>25 DR. THOMPSON: I just want to</p>

Judith Wolf, M.D.

Page 642	Page 644
<p>1 check.</p> <p>2 MR. ZELLERS: Sure.</p> <p>3 DR. THOMPSON: Page 14?</p> <p>4 MR. ZELLERS: Page 18.</p> <p>5 DR. THOMPSON: 18.</p> <p>6 A. I'm sorry. I didn't realize we</p> <p>7 were talking about a reference to my report.</p> <p>8 I thought you asked me --</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. I did. I did. I'm not -- all</p> <p>11 I asked you was: Is this something that you</p> <p>12 looked at and referred to in your report?</p> <p>13 And I think you said yes, and that was --</p> <p>14 A. No. You -- you asked me if I</p> <p>15 was familiar with this paper.</p> <p>16 Q. Right.</p> <p>17 A. And I said yes.</p> <p>18 DR. THOMPSON: And then you</p> <p>19 said you referred to this in -- as</p> <p>20 support for dose-response, correct?</p> <p>21 Isn't that what you asked her?</p> <p>22 MR. ZELLERS: I did.</p> <p>23 DR. THOMPSON: And the</p> <p>24 Schildkraut referred to for</p> <p>25 dose-response is 2016, not the paper</p>	<p>1 cancer risk have been conducted predominantly</p> <p>2 in white populations and histotype-specific</p> <p>3 analyses among African American populations</p> <p>4 are limited.</p> <p>5 That's what the authors state,</p> <p>6 right?</p> <p>7 A. That's correct. That's what</p> <p>8 they state.</p> <p>9 Q. And do you agree that genital</p> <p>10 powder use is more common among</p> <p>11 African American women, if you know?</p> <p>12 A. Yes. That's been found in most</p> <p>13 of the studies where there's any</p> <p>14 African American women. Although he's</p> <p>15 correct in saying that most of the studies</p> <p>16 don't have very many African American women.</p> <p>17 Q. Under Results, the authors</p> <p>18 state: The prevalence of ever genital powder</p> <p>19 use for cases was 35.8% among</p> <p>20 African American women and 29.5% among white</p> <p>21 women.</p> <p>22 Is that right?</p> <p>23 A. Are you looking at the results</p> <p>24 in the paper or the results in the abstract?</p> <p>25 Q. I'm looking at the results in</p>
Page 643	Page 645
<p>1 that you just gave us.</p> <p>2 MR. ZELLERS: Ah. Thank you.</p> <p>3 DR. THOMPSON: You're welcome.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. So we talked earlier about</p> <p>6 Schildkraut 2016, correct, generally?</p> <p>7 A. Generally.</p> <p>8 Q. So this paper is a 2021 paper</p> <p>9 by Davis, and Schildkraut is another one of</p> <p>10 the authors; is that right?</p> <p>11 A. That's correct.</p> <p>12 Q. One of the things that</p> <p>13 Schildkraut was studying in this 2021 article</p> <p>14 was the potential connection between talc and</p> <p>15 ovarian cancer in the African-American</p> <p>16 population; is that right?</p> <p>17 And I'm looking at the</p> <p>18 Abstract, Background, for that information.</p> <p>19 A. Yes, so looking at genital</p> <p>20 powder use and ovarian cancer risk in</p> <p>21 African Americans.</p> <p>22 Q. And specifically the authors</p> <p>23 state: Genital powder use is more common</p> <p>24 among African American women; however,</p> <p>25 studies of genital powder use and ovarian</p>	<p>1 the abstract.</p> <p>2 A. So the prevalence of ever</p> <p>3 powder use is what you're talking about?</p> <p>4 Yes. 35.8% in African American women and</p> <p>5 29.5% in white women.</p> <p>6 Q. In this study the authors found</p> <p>7 that there was not a dose-response</p> <p>8 relationship regarding frequency or duration</p> <p>9 of genital powder use and ovarian cancer</p> <p>10 among African American or white women; is</p> <p>11 that right?</p> <p>12 And I'm looking at the</p> <p>13 Discussion section on page 4 of this article.</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. I'm looking for the results</p> <p>16 that show that, so just give me one minute.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Sure.</p> <p>19 (Document review.)</p> <p>20 MR. ZELLERS: Let's go off the</p> <p>21 record just for a second.</p> <p>22 (Recess taken, 2:50 p.m. to</p> <p>23 2:54 p.m. CDT)</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. I had asked you when we took a</p>

Judith Wolf, M.D.

Page 646	Page 648
<p>1 short break if you agreed with the authors'</p> <p>2 conclusions in this Schildkraut and Davis</p> <p>3 2021 publication that there was not a</p> <p>4 dose-response relationship regarding</p> <p>5 frequency or duration of genital powder use</p> <p>6 and ovarian cancer among African American or</p> <p>7 white women.</p> <p>8 MS. GARBER: Object to the</p> <p>9 form.</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 A. So I looked at the results of</p> <p>12 the tables. I read the results and then</p> <p>13 looked at the tables that correspond to</p> <p>14 frequency of use, which they looked at less</p> <p>15 than once a week or more than once a week.</p> <p>16 They looked at all women, African American</p> <p>17 women and white women. And they separated</p> <p>18 out high-grade serous, which is the type of</p> <p>19 cancer Ms. Swann had, from all other</p> <p>20 histotypes.</p> <p>21 And in African American women,</p> <p>22 there were 14 who used -- reported using less</p> <p>23 than once a week, and their relative risk was</p> <p>24 1.18. There were 122 who used it more than</p> <p>25 once a week, and their relative risk was</p>	<p>1 significant, correct?</p> <p>2 DR. THOMPSON: Object to form.</p> <p>3 A. The 1.53 is statistically</p> <p>4 significant.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. All right. Do you disagree</p> <p>7 with the authors' statement in the Davis and</p> <p>8 Schildkraut 2021 paper that there was not a</p> <p>9 dose-response relationship regarding</p> <p>10 frequency or duration of genital powder use</p> <p>11 in ovarian cancer among African American or</p> <p>12 white women?</p> <p>13 A. I do somewhat disagree with it</p> <p>14 because when I look at the results -- and I'm</p> <p>15 particularly looking at Ms. Swann, she fits</p> <p>16 all the categories of the highest risk.</p> <p>17 There is a higher risk with more frequency of</p> <p>18 use and high-grade serous in African American</p> <p>19 women, although not statistically</p> <p>20 significant, and in African American women</p> <p>21 who use it less than 20 years, there's a 1.53</p> <p>22 odds ratio risk, and that would be right</p> <p>23 where Ms. Swann sits.</p> <p>24 Q. Do you disagree with the</p> <p>25 finding as it relates to Ms. Swann and her</p>
Page 647	Page 649
<p>1 1.34. It was not statistically higher, but</p> <p>2 it was definitely higher.</p> <p>3 And then in Table 5 -- and this</p> <p>4 is on page OF7, looking at duration of use,</p> <p>5 again, they looked at all participants,</p> <p>6 separated out African American women, white</p> <p>7 women, all cases, high-grade serous cases and</p> <p>8 other histotypes. And now I'm specifically</p> <p>9 looking again at African American women,</p> <p>10 high-grade serous, less than 20 years use,</p> <p>11 1.53 relative risk; greater than 20 years,</p> <p>12 1.19.</p> <p>13 So I did not see a</p> <p>14 difference -- a statistically significant</p> <p>15 difference in either case, but in frequency,</p> <p>16 which was fairly nonspecific and few people</p> <p>17 who used it less than once a week, it was</p> <p>18 higher in the more frequent users.</p> <p>19 And in the range where</p> <p>20 Ms. Swann is given that she had her tubes</p> <p>21 tied after 15 years of use, less than</p> <p>22 20 years of use in this study, the risk was</p> <p>23 1.53.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. But not statistically</p>	<p>1 particular characteristics or do you disagree</p> <p>2 with the authors' conclusion that they did</p> <p>3 not find dose-response?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. Well, I -- two things.</p> <p>6 Specifically, I disagree with Ms. Swann. As</p> <p>7 far as frequency of use, I disagree with the</p> <p>8 findings. There was an increased risk,</p> <p>9 although it wasn't statistically significant.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. So the authors are wrong when</p> <p>12 they state there was not a dose-response</p> <p>13 relationship regarding frequency or duration</p> <p>14 of genital powder use and ovarian cancer</p> <p>15 among African American or white women per</p> <p>16 your reading of this study?</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. That is not what I said. What</p> <p>19 I said was, as far as the frequency of use, I</p> <p>20 disagree with that statement. There was no</p> <p>21 statistical significant difference in</p> <p>22 duration of use.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. So --</p> <p>25 A. I agree with that part of the</p>

56 (Pages 646 to 649)



Judith Wolf, M.D.

<p style="text-align: right;">Page 650</p> <p>1 statement.</p> <p>2 Q. -- you disagree with the</p> <p>3 authors with respect to frequency, but not</p> <p>4 with respect to duration, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. I believe that their findings</p> <p>7 support a difference with increased frequency</p> <p>8 and not with increased duration.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. In order to establish</p> <p>11 dose-response, do you need both frequency and</p> <p>12 duration or is just duration enough or just</p> <p>13 frequency enough?</p> <p>14 A. I think you could have one or</p> <p>15 both or -- but not -- I don't believe that</p> <p>16 you have to have both. But Ms. Swann had</p> <p>17 frequency and duration.</p> <p>18 Q. The authors -- if we look at</p> <p>19 their conclusion number 1 in the abstract,</p> <p>20 while genital powder use was more prevalent</p> <p>21 among African American women, the</p> <p>22 associations between genital powder use and</p> <p>23 ovarian cancer risk were similar across race</p> <p>24 and did not materially vary by histotype.</p> <p>25 Do you agree with that?</p>	<p style="text-align: right;">Page 652</p> <p>1 study.</p> <p>2 Q. And yet, in this study what the</p> <p>3 authors found is that even though African</p> <p>4 American women used talc more than white</p> <p>5 women, these authors did not find a</p> <p>6 statistically significant association in</p> <p>7 African American women, but they did in white</p> <p>8 women; is that right?</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 A. They did not find a difference</p> <p>11 between the association in African American</p> <p>12 women and white women. They found an</p> <p>13 association in both, but it was about the</p> <p>14 same.</p> <p>15 And what I'm saying is that</p> <p>16 they are different groups of women, and so</p> <p>17 just the fact that one group used more</p> <p>18 talc -- had a higher rate of use of talcum</p> <p>19 powder than the other doesn't necessarily</p> <p>20 mean that they should have more ovarian</p> <p>21 cancer or a higher risk.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. But you would expect the group</p> <p>24 of women that used more talcum powder to have</p> <p>25 a higher risk of ovarian cancer, if you're</p>
<p style="text-align: right;">Page 651</p> <p>1 A. I agree that that was the</p> <p>2 findings in their report.</p> <p>3 Q. That's not what you would</p> <p>4 necessarily expect if talcum powder was</p> <p>5 causing ovarian cancer, correct?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. I'm going to disagree with that</p> <p>8 statement. The fact that African American</p> <p>9 women used talc more often than whites</p> <p>10 doesn't necessarily mean that talcum powder's</p> <p>11 going to cause more ovarian cancer in them,</p> <p>12 because they're different people. They have</p> <p>13 different genetic makeups. In fact, every</p> <p>14 African American or every white woman has a</p> <p>15 different genetic makeup.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. I understand that, but we're</p> <p>18 looking at them collectively in this study,</p> <p>19 correct?</p> <p>20 A. Yes.</p> <p>21 Q. And the authors acknowledge and</p> <p>22 you've acknowledged that genital powder use</p> <p>23 is more common among African American women,</p> <p>24 correct?</p> <p>25 A. 35% versus 30%, 29.5%, in this</p>	<p style="text-align: right;">Page 653</p> <p>1 opinions in this matter are correct, right?</p> <p>2 DR. THOMPSON: Object to form,</p> <p>3 asked and answered.</p> <p>4 A. No, that's -- that's not true.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Explain why, then, that you</p> <p>7 would not expect the group of women who used</p> <p>8 talcum powder more, why you would not expect</p> <p>9 them to have a higher rate of ovarian cancer.</p> <p>10 DR. THOMPSON: Object to form,</p> <p>11 asked and answered.</p> <p>12 THE WITNESS: So when it's been</p> <p>13 asked and answered and that's your</p> <p>14 objection, I'm not sure if I'm</p> <p>15 supposed to answer again or not.</p> <p>16 DR. THOMPSON: Yeah, you are.</p> <p>17 THE WITNESS: Okay.</p> <p>18 A. So more African American women</p> <p>19 use powder. The risk of developing ovarian</p> <p>20 cancer from powder was the same in African</p> <p>21 American and white women, or similar.</p> <p>22 Let's see. The -- the African</p> <p>23 American women was 1.22, 1.36.</p> <p>24 Just because more African</p> <p>25 American women use talc doesn't mean that</p>

57 (Pages 650 to 653)

Judith Wolf, M.D.

Page 654	Page 656
<p>1 they're going to get -- that the risk -- the</p> <p>2 odds ratio has to be higher in them.</p> <p>3 Q. Why not?</p> <p>4 A. I don't know how better to</p> <p>5 explain it. Why would it be?</p> <p>6 Q. Because more African American</p> <p>7 women use talcum powder.</p> <p>8 DR. THOMPSON: Object to form,</p> <p>9 same objection, asked and answered</p> <p>10 numerous times.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. So if you have a group of women</p> <p>13 who use talcum powder more than another group</p> <p>14 of women, wouldn't you expect the group of</p> <p>15 women who used talcum powder more frequently,</p> <p>16 that they would have a higher risk of ovarian</p> <p>17 cancer if, you know, your theory and your</p> <p>18 opinions are correct?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. No.</p> <p>21 DR. THOMPSON: Asked and</p> <p>22 answered numerous times.</p> <p>23 A. That's not what I would expect.</p> <p>24 I would expect if we had genetically</p> <p>25 homogeneous women that might be true, but we</p>	<p>1 identification.)</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. And it's an excerpt from the</p> <p>4 deposition of Ms. Huston, page 53, beginning</p> <p>5 at line 7.</p> <p>6 DR. THOMPSON: If you want to</p> <p>7 read her the passage while I'm getting</p> <p>8 it up, that's fine.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Ms. Huston, Ms. Swann's</p> <p>11 daughter testified that Ms. Swann's paternal</p> <p>12 aunt had breast cancer, and the testimony is:</p> <p>13 QUESTION: All right. On</p> <p>14 page 18, under Family Medical History, we've</p> <p>15 got Edna Pye Ball, paternal aunt, now</p> <p>16 deceased, breast cancer.</p> <p>17 I think when we were talking</p> <p>18 earlier, you mentioned another aunt on your</p> <p>19 dad's side. I think you told me that both</p> <p>20 Mae and Annette had breast cancer; is that</p> <p>21 right?</p> <p>22 ANSWER: And my grandmother, my</p> <p>23 paternal grandmother, yes.</p> <p>24 Okay.</p> <p>25 And with Edna Pye Ball, I'm</p>
Page 655	Page 657
<p>1 don't. We know that African American women</p> <p>2 have a lower risk of ovarian cancer overall</p> <p>3 compared to white women.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. Do you know why?</p> <p>6 A. Because -- do I know why? Not</p> <p>7 specifically, no.</p> <p>8 Q. The reason, then, that you</p> <p>9 don't find it unusual, the findings in this</p> <p>10 study, is because there's something about</p> <p>11 African American women which we don't know</p> <p>12 that makes them less susceptible to ovarian</p> <p>13 cancer; is that correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. Epidemiologically, that's</p> <p>16 correct.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Before I get too far ahead, I</p> <p>19 want to go back to family history. And I was</p> <p>20 able to go back and look at the deposition.</p> <p>21 And your counsel can show you what we've</p> <p>22 marked or will mark as Deposition Exhibit 53.</p> <p>23 (Whereupon, Deposition Exhibit</p> <p>24 Wolf-53, Excerpt from Lydia Huston</p> <p>25 Deposition, was marked for</p>	<p>1 just not sure of the date.</p> <p>2 So does the reference to</p> <p>3 page 18, under Family Medical History, Edna</p> <p>4 Pye Ball, now deceased, breast cancer, does</p> <p>5 that refresh your recollection as to</p> <p>6 Ms. Swann's paternal aunt having breast</p> <p>7 cancer?</p> <p>8 And I'm sorry, Doctor, I don't</p> <p>9 have the testimony --</p> <p>10 A. That just confused me more</p> <p>11 because --</p> <p>12 Q. Let me ask you, then, a</p> <p>13 hypothetical.</p> <p>14 If Ms. Swann's paternal aunt</p> <p>15 had breast cancer, hypothetically --</p> <p>16 A. Paternal aunt had breast</p> <p>17 cancer.</p> <p>18 Q. Yes.</p> <p>19 A. Yes.</p> <p>20 Q. Would that be information that</p> <p>21 you would consider in terms of determining</p> <p>22 whether family history was a risk factor in</p> <p>23 her case?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. A paternal aunt who had breast</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 658</p> <p>1 cancer, I would need more information about</p> <p>2 was it premenopausal or postmenopausal,</p> <p>3 because somewhere else it says it was the</p> <p>4 paternal grandmother who had breast cancer --</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. I understand.</p> <p>7 A. -- so I'm not clear.</p> <p>8 Q. That's why I'm asking you in</p> <p>9 terms of a hypothetical.</p> <p>10 A. I would need more information.</p> <p>11 Q. All right. Is a finding that a</p> <p>12 patient's paternal aunt had breast cancer, is</p> <p>13 that a factor you would consider when looking</p> <p>14 at family history?</p> <p>15 A. I consider the entire family</p> <p>16 history. One paternal aunt who had breast</p> <p>17 cancer would not put a patient at increased</p> <p>18 risk for ovarian cancer.</p> <p>19 Q. How about a paternal aunt with</p> <p>20 breast cancer and a grandmother with ovarian</p> <p>21 cancer? Hypothetically, if those are the</p> <p>22 facts in this case --</p> <p>23 A. What side is the grandmother</p> <p>24 on?</p> <p>25 Q. We looked at that record early</p>	<p style="text-align: right;">Page 660</p> <p>1 grandmother was a blood relative of the</p> <p>2 patient --</p> <p>3 A. Well, I would assume she was,</p> <p>4 unless the patient was somehow adopted.</p> <p>5 Q. Right. And the paternal aunt</p> <p>6 was a blood relative, so that in our</p> <p>7 hypothetical --</p> <p>8 A. I would assume -- yeah. Okay.</p> <p>9 So it could be -- okay.</p> <p>10 Q. So assume both the paternal</p> <p>11 aunt that had breast cancer and the</p> <p>12 grandmother, blood relative, had ovarian</p> <p>13 cancer. Would that be enough for you to</p> <p>14 consider in a case the possibility of family</p> <p>15 history being a risk factor for ovarian</p> <p>16 cancer?</p> <p>17 A. Not unless I knew that the</p> <p>18 grandmother was from the same side of the</p> <p>19 family as the paternal aunt, and I had more</p> <p>20 information about the paternal aunt's</p> <p>21 grandmother; was it premenopausal or</p> <p>22 postmenopausal?</p> <p>23 Q. That's what you would need in</p> <p>24 terms of additional --</p> <p>25 A. To make some kind of an</p>
<p style="text-align: right;">Page 659</p> <p>1 on. We don't know. So that was an earlier</p> <p>2 deposition exhibit --</p> <p>3 A. 49.</p> <p>4 Q. -- 49, the record from Missouri</p> <p>5 Baptist Medical Center, that the grandmother</p> <p>6 had ovarian cancer.</p> <p>7 A. I see that.</p> <p>8 Q. So my question to you is, and</p> <p>9 I'll phrase it in terms of a hypothetical,</p> <p>10 that in a case if a patient has a grandmother</p> <p>11 with ovarian cancer and a paternal aunt with</p> <p>12 breast cancer, is that supportive of family</p> <p>13 history being a risk factor or a potential</p> <p>14 risk factor for ovarian cancer?</p> <p>15 DR. THOMPSON: Object to form.</p> <p>16 A. With that information alone,</p> <p>17 that does not give me any information to</p> <p>18 support a family history. The grandmother</p> <p>19 could be on the maternal side, the aunt on</p> <p>20 the father's side. That would have no</p> <p>21 relationship.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. If, hypothetically, both</p> <p>24 relatives were -- well, strike that.</p> <p>25 Hypothetically, if the</p>	<p style="text-align: right;">Page 661</p> <p>1 assessment. I'm sorry.</p> <p>2 Q. That's all right.</p> <p>3 That's the additional</p> <p>4 information you would need to make an</p> <p>5 assessment as to whether family history was a</p> <p>6 potential risk factor?</p> <p>7 A. Yes.</p> <p>8 Q. A couple more questions.</p> <p>9 Are you aware that Ms. Swann</p> <p>10 had vulvar lesions while being treated with</p> <p>11 chemotherapy?</p> <p>12 And I can show you the record,</p> <p>13 but --</p> <p>14 A. Yeah, I vaguely remember that.</p> <p>15 But I don't remember the details, if you have</p> <p>16 that record.</p> <p>17 Q. Sure.</p> <p>18 Let's mark as Deposition</p> <p>19 Exhibit 54...</p> <p>20 (Whereupon, Deposition Exhibit</p> <p>21 Wolf-54, Medical Record(s),</p> <p>22 SWANNV_ELBENDARYA_0035 -</p> <p>23 SWANNV_ELBENDARYA_0036, was marked for</p> <p>24 identification.)</p> <p>25 ///</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 662</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Do you see Deposition</p> <p>3 Exhibit 54, this medical record excerpt, and</p> <p>4 I'm looking at the second paragraph: On</p> <p>5 examination she has an area on the right side</p> <p>6 of the lower vulvar area near the</p> <p>7 posterior -- is that fourchette?</p> <p>8 A. Fourchette.</p> <p>9 Q. -- that is irregularly shaped.</p> <p>10 It is obviously abraded. It has the</p> <p>11 appearance of a possibility that there were</p> <p>12 several blisters that became confluent.</p> <p>13 A. I see that.</p> <p>14 Q. All right. Ms. Swann reported</p> <p>15 to a nurse practitioner that she was using</p> <p>16 cornstarch and Vaseline on her vulvar area</p> <p>17 and rectum. Are you aware of that?</p> <p>18 A. I see that there, yes.</p> <p>19 Q. The nurse practitioner told her</p> <p>20 to stop using the cornstarch; is that right?</p> <p>21 A. Yes.</p> <p>22 Q. We had looked earlier at the</p> <p>23 Wentzensen and O'Brien article from 2001</p> <p>24 [sic], and do you recall in that article that</p> <p>25 the authors also discussed cornstarch as an</p>	<p style="text-align: right;">Page 664</p> <p>1 inflammation, but it doesn't last -- stay</p> <p>2 there to cause chronic inflammation.</p> <p>3 Q. Is that a no to my question?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. As far as I'm aware, cornstarch</p> <p>6 causes acute inflammation. It's broken down</p> <p>7 by the body, and so it wouldn't cause a</p> <p>8 chronic inflammatory response.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Cornstarch, because of the</p> <p>11 sugars it contains, can cause yeast</p> <p>12 infections, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. I'd have to see a paper that</p> <p>15 shows that cornstarch causes yeast</p> <p>16 infections. That's not something that I'm</p> <p>17 clinically aware of.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. Do you have the Wentzensen</p> <p>20 paper?</p> <p>21 A. I do.</p> <p>22 (Interruption by the</p> <p>23 stenographer.)</p> <p>24 (Discussion off the record.)</p> <p>25 ///</p>
<p style="text-align: right;">Page 663</p> <p>1 inflammatory agent?</p> <p>2 DR. THOMPSON: Object to form.</p> <p>3 A. I don't recall that from that</p> <p>4 paper, and I think that paper was from 2021,</p> <p>5 not 2001.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. If I said 2001, I misspoke. It</p> <p>8 was from 2021.</p> <p>9 Cornstarch can cause</p> <p>10 inflammation; is that right?</p> <p>11 A. Acute inflammation.</p> <p>12 Q. Well, cornstarch can cause</p> <p>13 either or both acute inflammation or chronic</p> <p>14 inflammation, correct?</p> <p>15 DR. THOMPSON: Object to form.</p> <p>16 A. Cornstarch can cause acute</p> <p>17 inflammation. What's not clear for me for</p> <p>18 this was, was she using cornstarch to try to</p> <p>19 treat that area, which is what I was assuming</p> <p>20 when I was reading this.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Can cornstarch cause chronic</p> <p>23 inflammation?</p> <p>24 A. Cornstarch is broken down by</p> <p>25 the body, and so it can cause acute</p>	<p style="text-align: right;">Page 665</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Doctor, I'm looking on</p> <p>3 page 2 --</p> <p>4 A. Yes.</p> <p>5 Q. -- of the Wentzensen and</p> <p>6 O'Brien paper, 2021.</p> <p>7 A. Yes.</p> <p>8 Q. The very last sentence, page 2,</p> <p>9 under Chemical Properties of Talc and Body</p> <p>10 Powder?</p> <p>11 A. I see that.</p> <p>12 Q. The authors state: It cannot</p> <p>13 be excluded that other ingredients of body</p> <p>14 powders, such as cornstarch, may also have</p> <p>15 biological effects, for example, by causing</p> <p>16 irritation or inflammation of the female</p> <p>17 reproductive tract.</p> <p>18 Do you see that?</p> <p>19 A. I see that.</p> <p>20 Q. And you have no disagreement</p> <p>21 with that, do you?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. That's what I just said before,</p> <p>24 that it can cause inflammation.</p> <p>25 ///</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 666</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. All right. Are you aware that</p> <p>3 the FDA banned cornstarch on surgical gloves</p> <p>4 because of the inflammatory responses it can</p> <p>5 cause?</p> <p>6 A. Yes. It banned any powder use</p> <p>7 on surgical gloves, I think, in the '90s.</p> <p>8 Q. You --</p> <p>9 A. Or maybe the 2000s. I don't</p> <p>10 remember the year.</p> <p>11 Q. Do you consider douching to be</p> <p>12 a risk factor for ovarian cancer?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. I do not, but I highly</p> <p>15 discourage my patients from douching.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. Why is that?</p> <p>18 A. Because it upsets the normal</p> <p>19 bacterial flora in the vagina and can</p> <p>20 increase the risk of infection.</p> <p>21 Q. Are you familiar the Sister</p> <p>22 Study, which is one of the cohort studies?</p> <p>23 A. I am.</p> <p>24 Q. And that's Gonzalez 2016, and</p> <p>25 they wrote an article, Douching, Talc Use and</p>	<p style="text-align: right;">Page 668</p> <p>1 A. I see that.</p> <p>2 Q. So this study found a</p> <p>3 statistically significant increased risk for</p> <p>4 ovarian cancer for douching but not for</p> <p>5 perineal talc use; is that right?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. This study -- what they asked,</p> <p>8 if you look just above the Results in their</p> <p>9 Methods: At baseline, participants were</p> <p>10 asked about douching and talc use during the</p> <p>11 previous 12 months.</p> <p>12 So that -- they only looked at</p> <p>13 that one-year period, the previous 12 months</p> <p>14 from the time they were asked.</p> <p>15 That's not enough information</p> <p>16 for me to know what any association or</p> <p>17 results that they got, what they mean from</p> <p>18 their study. And this is the only study that</p> <p>19 I'm aware of that showed any correlation</p> <p>20 between douching and ovarian cancer risk.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Well, they go on to say that:</p> <p>23 During follow-up, 154 participants reported a</p> <p>24 diagnosis of ovarian cancer. And the median</p> <p>25 follow-up was 6.6 years. Is that right?</p>
<p style="text-align: right;">Page 667</p> <p>1 Risk of Ovarian Cancer, correct?</p> <p>2 A. I don't remember the exact</p> <p>3 title of it.</p> <p>4 Q. Let's mark as Exhibit 55...</p> <p>5 (Whereupon, Deposition Exhibit</p> <p>6 Wolf-55, Douching, Talc Use, and Risk</p> <p>7 of Ovarian Cancer, by Gonzalez et al,</p> <p>8 was marked for identification.)</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Have you had a chance to take a</p> <p>11 look at the article?</p> <p>12 A. Yes.</p> <p>13 Q. And it's titled Douching, Talc</p> <p>14 Use and Risk of Ovarian Cancer; is that</p> <p>15 right?</p> <p>16 A. Yes.</p> <p>17 Q. The authors found -- and I'm</p> <p>18 looking under Results in the Abstract: There</p> <p>19 was little association between baseline</p> <p>20 perineal talc use and subsequent ovarian</p> <p>21 cancer. Douching was more common among talc</p> <p>22 users, and douching at baseline was</p> <p>23 associated with increased subsequent risk of</p> <p>24 ovarian cancer.</p> <p>25 Do you see that?</p>	<p style="text-align: right;">Page 669</p> <p>1 A. Yes.</p> <p>2 Q. Do you consider douching with</p> <p>3 also using talc to be a risk factor for</p> <p>4 ovarian cancer?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. Again, I'm not aware of any</p> <p>7 studies that look at specifically the</p> <p>8 combination of those two activities other</p> <p>9 than this study, and douching is not</p> <p>10 something that -- again, I highly recommend</p> <p>11 my patients do not douche for many reasons.</p> <p>12 Not for ovarian cancer risk, but for other</p> <p>13 health reasons and infection reasons.</p> <p>14 And this is the only study that</p> <p>15 I'm aware of that found that douching was a</p> <p>16 risk for ovarian cancer. And it was a poorly</p> <p>17 designed study as far as the questions they</p> <p>18 asked and the usage of either douching or</p> <p>19 talc use.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. Do you consider douching with</p> <p>22 also using talc to be a potential risk factor</p> <p>23 for ovarian cancer, but more information and</p> <p>24 study is needed?</p> <p>25 DR. THOMPSON: Object to form.</p>

61 (Pages 666 to 669)



Judith Wolf, M.D.

Page 670	Page 672
<p>1 MS. GARBER: Object to the 2 form. 3 A. I would not recommend anybody 4 do more study on douching of anything because 5 I think it's not a good thing. It's not 6 healthy for women to douche. 7 BY MR. ZELLERS: 8 Q. In Ms. Swann's case, as in the 9 other cases we've talked about, there's the 10 potential that there could be an unknown 11 cause or risk factor for ovarian cancer 12 that's related to her diagnosis of ovarian 13 cancer, correct? 14 DR. THOMPSON: Object to form. 15 MS. GARBER: Object to the 16 form. 17 A. So I reviewed all of the -- all 18 of her records and her risk factors, and 19 everything that's identified as a risk factor 20 for ovarian cancer or a protective factor I 21 assessed, and her risk factor that was clear 22 for me for ovarian cancer was her talc use. 23 BY MR. ZELLERS: 24 Q. Could you answer my question? 25 A. I don't remember your question.</p>	<p>1 BY MR. ZELLERS: 2 Q. We have the possibility of a 3 hereditary gene mutation or a gene mutation 4 that is not yet -- let me withdraw that. 5 There's the possibility of a 6 genetic gene mutation that either has not 7 been tested for or not been discovered, 8 correct? 9 MS. GARBER: Object to the 10 form. 11 A. There's nothing in her history 12 that suggests that she has any genetic 13 mutation, inherited genetic mutation. 14 BY MR. ZELLERS: 15 Q. It's a possibility, correct? 16 MS. GARBER: Object to the 17 form. 18 A. It's highly unlikely. There's 19 nothing in her history to suggest that or 20 support that. 21 BY MR. ZELLERS: 22 Q. What would you look for that 23 might be indicative or create the potential 24 for an undiscovered or undiagnosed gene 25 mutation?</p>
Page 671	Page 673
<p>1 DR. THOMPSON: Object to form. 2 BY MR. ZELLERS: 3 Q. All right. In all of these 4 cases, there's a possibility of an unknown 5 cause of ovarian cancer, either unknown or 6 undiscovered, correct? 7 DR. THOMPSON: Object to form. 8 A. In Ms. Swann's case and in all 9 of the cases that we've discussed today and 10 yesterday, Ms. Gallardo, and this case too, 11 given what I know about ovarian cancer and 12 the risks factors that are known, I think 13 it's highly unlikely that there would be 14 something else that caused -- would be a 15 cause of her ovarian cancer that was -- that 16 I did not already assess, something unknown. 17 It would be highly unlikely. 18 BY MR. ZELLERS: 19 Q. Well, we have the possibility 20 of a family history, correct? 21 MS. GARBER: Object to the 22 form. 23 DR. THOMPSON: Object to form. 24 A. I have no evidence in her 25 family history that that's a risk factor.</p>	<p>1 DR. THOMPSON: Object to form. 2 That's asked and answered on numerous 3 occasions. 4 A. Well, I'm not sure what you're 5 asking. Are you asking what in a family 6 history would I look for? 7 BY MR. ZELLERS: 8 Q. No. What I'm saying is there 9 are many undiscovered genetic mutations, 10 correct? I mean, that's a common fact. 11 A. That doesn't mean they're 12 inherited. There are many genetic mutations. 13 Q. Let's put aside inherited. So 14 I'm asking you -- 15 A. So not inherited. 16 Q. Not inherited. Genetic 17 mutations. 18 A. There are many genetic 19 mutations in ovarian cancer. Every ovarian 20 cancer has many, many genetic mutations by 21 the time we find it's cancer. 22 Q. Understood. 23 There may be genetic mutations 24 that are yet undiscovered, correct? 25 DR. THOMPSON: Object to form.</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 674</p> <p>1 A. There may be genetic mutations 2 that are rare that are found in some cancers. 3 That would not have any impact on my opinion 4 in this case. 5 BY MR. ZELLERS: 6 Q. Understood. 7 In your opinion, there are no 8 other possible causes for Ms. Swann's ovarian 9 cancer other than talcum powder use; is that 10 your opinion? 11 DR. THOMPSON: Object to form. 12 A. I'm going to go back to ovarian 13 cancer is multifactorial, and the only thing 14 that I can find in her history that is a 15 clear risk factor and a causative factor of 16 ovarian cancer is her talc use. 17 BY MR. ZELLERS: 18 Q. We did discuss many times, and 19 neither one of us want to repeat it, but we 20 discussed many times that the majority of 21 ovarian cancers have an unknown cause, 22 correct? 23 DR. THOMPSON: Object to form. 24 A. You have said that many times, 25 and I have said that ovarian cancer is</p>	<p style="text-align: right;">Page 676</p> <p>1 BY MR. ZELLERS: 2 Q. So your testimony is, in the 3 majority of cases, physicians, competent 4 physicians, can determine the cause of the 5 ovarian cancer? 6 MS. GARBER: Object to the 7 form. 8 DR. THOMPSON: Objection. 9 MR. ZELLERS: No. If that's 10 her testimony, I'd like to understand 11 that. 12 DR. THOMPSON: That is not her 13 testimony. 14 THE WITNESS: That is not my 15 testimony. 16 (Simultaneous discussion 17 interrupted by the stenographer.) 18 DR. THOMPSON: That misstates 19 her testimony on multiple occasions. 20 A. So my testimony is that about 21 15% of ovarian cancers have a recognizable 22 inherited genetic mutation, which is a risk 23 factor. And there are multiple other risk 24 factors for ovarian cancer. Some women have 25 more than one that you can identify. Some</p>
<p style="text-align: right;">Page 675</p> <p>1 multifactorial, about 15% of the time there's 2 an inherited mutation. The other ones it's 3 some noninherited exposure. Things like 4 talc, endometriosis, incessant ovulation, 5 infertility, nulliparity, those are things 6 that can be causes of ovarian cancer. 7 Some women have more than one 8 of those that you can identify. Some have 9 none, some have one. 10 Q. In the majority of cases of 11 ovarian cancer, the specific cause cannot be 12 determined. Agreed? 13 DR. THOMPSON: Object to form. 14 BY MR. ZELLERS: 15 Q. I understand in this case you 16 believe you've determined at least a cause of 17 the ovarian cancer. My question is broader, 18 that in the majority of cases of ovarian 19 cancer, a specific cause or causes cannot be 20 determined. Agreed? 21 MS. GARBER: Object to the 22 form. 23 DR. THOMPSON: Object to form. 24 A. I don't agree with that 25 statement.</p>	<p style="text-align: right;">Page 677</p> <p>1 have one. Some have none. 2 BY MR. ZELLERS: 3 Q. And my question to you is: Do 4 you agree that in the majority of cases of 5 ovarian cancer, a specific cause cannot be 6 determined? 7 DR. THOMPSON: Object to form. 8 A. I'm going to give you the same 9 answer I just gave you; that women -- some 10 women with ovarian cancer have a known 11 inherited mutation that increases their risk. 12 BY MR. ZELLERS: 13 Q. And we've agreed that's 10 to 14 15%, correct? 15 A. Yes. 16 Q. All right. And so my question 17 is: In the majority of cases, putting aside 18 the 10 to 15% where there is, you know, a 19 known hereditary genetic mutation, putting 20 those aside, in the other 85% of cases, the 21 majority of cases, we don't know what causes 22 a particular woman's ovarian cancer. 23 DR. THOMPSON: Object to form, 24 asked and answered. 25 A. My answer is that in many of</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 678</p> <p>1 the other women who don't have an inherited</p> <p>2 genetic mutation, you can identify one or</p> <p>3 more risk factors that can be a cause of her</p> <p>4 cancer.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Can be, but you don't know if</p> <p>7 they are or are not, correct?</p> <p>8 DR. THOMPSON: Object to form,</p> <p>9 asked and answered.</p> <p>10 A. A genetic mutation can be a</p> <p>11 cause of her cancer. If she doesn't have a</p> <p>12 genetic mutation and has another risk factor,</p> <p>13 that can be a cause of her cancer.</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. Most cases of ovarian cancer</p> <p>16 are sporadic; is that right?</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 MS. GARBER: Object to the</p> <p>19 form.</p> <p>20 A. Sporadic means not inherited,</p> <p>21 most of the time in the medical literature.</p> <p>22 That doesn't mean you don't know what the</p> <p>23 cause of it could be.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Then let me ask you this</p>	<p style="text-align: right;">Page 680</p> <p>1 replacement therapy, could have age, could</p> <p>2 have a number of risk factors, could be</p> <p>3 BRCA-positive, but that doesn't necessarily</p> <p>4 mean that any one or combination of those</p> <p>5 things caused her ovarian cancer, correct?</p> <p>6 MS. GARBER: Object to the</p> <p>7 form.</p> <p>8 DR. THOMPSON: Object to form,</p> <p>9 asked and answered. I think we're</p> <p>10 about up to 30.</p> <p>11 A. I don't even know what that</p> <p>12 question was. I got confused. I'm sorry.</p> <p>13 So that...</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. Well, the question is: You've</p> <p>16 agreed that just because a woman has a risk</p> <p>17 factor does not mean that that risk factor is</p> <p>18 going to cause the woman to have ovarian</p> <p>19 cancer, correct?</p> <p>20 DR. THOMPSON: Object to form,</p> <p>21 again.</p> <p>22 A. So a risk factor doesn't have</p> <p>23 to cause cancer, but if a woman has cancer</p> <p>24 and she has a known risk factor, I consider</p> <p>25 that a cause of her cancer.</p>
<p style="text-align: right;">Page 679</p> <p>1 question, and if you can answer it, I'll be</p> <p>2 off of this topic.</p> <p>3 Is it your opinion that in the</p> <p>4 majority of cases of ovarian cancer, that you</p> <p>5 can determine what caused the ovarian cancer?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. It is my opinion that in many</p> <p>8 women you can -- you or anyone can identify</p> <p>9 risk factors that could cause her cancer.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Risk factors are not cause.</p> <p>12 We've discussed that a number of times,</p> <p>13 correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. So a risk factor can cause.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. It can or cannot. I mean, it</p> <p>18 could be either one, right?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. A causative risk factor -- a</p> <p>21 risk factor can cause, increases the risk.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. It increases the risk, but</p> <p>24 we've talked about a woman could have a</p> <p>25 family history, a woman could have hormone</p>	<p style="text-align: right;">Page 681</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. That's the way you've analyzed</p> <p>3 the cases and that's the basis on which</p> <p>4 you're giving opinions in this case, correct?</p> <p>5 A. The basis of my opinions is by</p> <p>6 reviewing all of the records to see what the</p> <p>7 risk factors were, to see if there's -- if it</p> <p>8 fits a known risk factor that could be a</p> <p>9 cause.</p> <p>10 Remember, there's multiple</p> <p>11 injuries to the cell that need to lead to</p> <p>12 ovarian cancer, so she can have more than one</p> <p>13 to cause her cancer.</p> <p>14 Q. The way you approached these</p> <p>15 cases is that if a woman has ovarian cancer</p> <p>16 and has a recognized risk factor, then you</p> <p>17 believe that the risk factor or factors that</p> <p>18 a woman may have are a cause of her ovarian</p> <p>19 cancer, correct?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. That is partly how I assess</p> <p>22 these cases.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. And that's why, for a woman</p> <p>25 that has ovarian cancer and has what you</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 682</p> <p>1 determine to be sufficient exposure to talcum 2 powder, you believe that whether talc is 3 found in the tissue or not, that talcum 4 powder use is a causative factor of the 5 woman's ovarian cancer, correct? 6 DR. THOMPSON: Object to form. 7 A. If I review the entire history 8 and everything and I assess that talcum use 9 was sufficient, that she had a patent 10 reproductive tract, that her type of ovarian 11 cancer is the type of ovarian cancer, 12 epithelial, that is associated with talc use, 13 in the cases that we've talked about today, I 14 have assessed that those are -- it's a cause 15 of their cancer. 16 MR. ZELLERS: All right. So 17 let's take a break. I may have one or 18 two other questions, but I'm 19 essentially done. 20 (Recess taken, 3:37 p.m. to 21 3:49 p.m. CDT) 22 BY MR. ZELLERS: 23 Q. Dr. Wolf, in Ms. Swann's case, 24 have you spoken with -- and maybe I've asked 25 you this already -- have you spoken with any</p>	<p style="text-align: right;">Page 684</p> <p>1 least 5 to 10 genetic mutations; is that 2 right? 3 A. My testimony is that there has 4 to be multiple mutations, and on average, for 5 epithelial cancers in humans in adults, it's 6 5 to 10. 7 Q. Do you agree that in any 8 woman's case, and specifically the four 9 patients we've talked today, today and 10 yesterday, Ms. Gallardo, Bondurant, Judkins 11 and Swann, that you do not know what caused 12 those 5 to 10 mutations that resulted in 13 their ovarian cancer, correct? 14 DR. THOMPSON: Object to form. 15 A. So I know that they all had 16 significant talc use and that can cause 17 mutations, one or more. And some of them -- 18 and I can't remember all of the details -- 19 had other risk factors that could cause an 20 inflammatory response and cause mutations. 21 The only time that I would be 22 able to say one thing caused one of those 23 mutations is if there was an inherited risk 24 factor in a BRCA mutation or some other 25 inherited risk factors that would be one of</p>
<p style="text-align: right;">Page 683</p> <p>1 of her treating physicians? 2 A. I have not. 3 Q. Is this the case in which one 4 of your former residents was a treating 5 physician, or that was Judkins? 6 A. That was Judkins, one of my 7 former fellows. 8 Q. So let me ask my questions for 9 Swann. 10 In Ms. Swann's case, have you 11 spoken with her daughter at all? 12 A. No. 13 Q. Have you spoken with any of the 14 treating physicians in Ms. Swann's case about 15 her medical history or ovarian cancer 16 diagnosis? 17 A. No. 18 Q. You never were a treating 19 physician with respect to Ms. Swann? 20 A. No. 21 Q. Never participated in her care; 22 is that right? 23 A. That's correct, I have not. 24 Q. Your testimony is that for 25 ovarian cancer to occur, there has to be at</p>	<p style="text-align: right;">Page 685</p> <p>1 those. 2 BY MR. ZELLERS: 3 Q. If we had an inherited risk 4 factor in any of these four cases or in any 5 of the cases that you reviewed, you could 6 definitively say that that inherited risk 7 factor caused one or more of the mutations? 8 A. One. It can only cause one. 9 Q. All right. Caused one of the 10 mutations. 11 A. Yes. 12 Q. However, for all other risk 13 factors, including talc, you can't say 14 definitively in any case that a specific risk 15 factor caused a genetic mutation, one of the 16 5 to 10 that are required for a woman to 17 develop ovarian cancer, correct? 18 DR. THOMPSON: Object to form, 19 asked and answered. 20 A. I disagree with that 21 clarification. I would say that I can't tell 22 you which mutations were caused by other risk 23 factors, but I know that they can cause 24 mutations. 25 ///</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 686</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. But you can't tell, of the 5 to</p> <p>3 10 mutations, which one or more were caused</p> <p>4 by talcum powder use, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. It doesn't matter to me which</p> <p>7 one or more.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. Well, you can't tell if any of</p> <p>10 the genetic mutations were caused by talcum</p> <p>11 powder use, correct?</p> <p>12 DR. THOMPSON: Object to form,</p> <p>13 asked and answered.</p> <p>14 A. I know that talcum powder use</p> <p>15 can cause mutations and can cause ovarian</p> <p>16 cancer.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. I understand that's your</p> <p>19 opinion. My question is a little different.</p> <p>20 In any individual patient,</p> <p>21 you're not able to say whether the talcum</p> <p>22 powder use caused one or two or more of the 5</p> <p>23 to 10 mutations required for ovarian cancer</p> <p>24 or that the talcum powder use caused any</p> <p>25 genetic mutation, correct?</p>	<p style="text-align: right;">Page 688</p> <p>1 any risk factor, correct?</p> <p>2 A. It's -- it's difficult to do</p> <p>3 that.</p> <p>4 MR. ZELLERS: All right. I</p> <p>5 have no further questions, other</p> <p>6 than -- I'll wait until Ms. Thompson</p> <p>7 is done. I just want to say we have</p> <p>8 covered all your opinions, but I'll do</p> <p>9 that when Ms. Thompson is done.</p> <p>10 DR. THOMPSON: Okay. Did you</p> <p>11 want to look at the CV while she's</p> <p>12 here?</p> <p>13 MR. ZELLERS: Oh, thank you.</p> <p>14 Thank you so much.</p> <p>15 DR. THOMPSON: Anytime, for</p> <p>16 you.</p> <p>17 MR. ZELLERS: All right. Yes.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. So we've marked the CV --</p> <p>20 MR. ZELLERS: Have we marked</p> <p>21 the CV?</p> <p>22 All right. The CV we will mark</p> <p>23 as Deposition Exhibit 56.</p> <p>24 (Whereupon, Deposition Exhibit</p> <p>25 Wolf-56, Curriculum Vitae, was marked</p>
<p style="text-align: right;">Page 687</p> <p>1 DR. THOMPSON: Object to form,</p> <p>2 asked and answered.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. I mean, that's just not</p> <p>5 something that's knowable and you're not able</p> <p>6 to give an opinion on that.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. So if I have an ovarian cancer</p> <p>9 and I can see all of the genetic mutations in</p> <p>10 that ovarian cancer, it's very difficult to</p> <p>11 know where those came from unless there is</p> <p>12 one of those mutations that she has that came</p> <p>13 from an inherited mutation.</p> <p>14 But by the time there's a</p> <p>15 cancer, there isn't just 5 or 10 that you can</p> <p>16 see that I would assess, there's hundreds.</p> <p>17 And I'm telling you that because I've looked</p> <p>18 at the karyotypes of ovarian cancers and you</p> <p>19 can see multiple genetic mutations, not just</p> <p>20 5 or 10, that led to cancer. Once it's</p> <p>21 cancer, it keeps mutating.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. Other than in the case of an</p> <p>24 inherited genetic mutation, you're not able</p> <p>25 to attribute a particular genetic mutation to</p>	<p style="text-align: right;">Page 689</p> <p>1 for identification.)</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. I'm not able to see it</p> <p>4 because -- well, I don't need to see it.</p> <p>5 That's okay.</p> <p>6 A. Yeah.</p> <p>7 Q. You have it electronically in</p> <p>8 front of you; is that right?</p> <p>9 A. I do. I do.</p> <p>10 Q. So we're going to print a copy.</p> <p>11 My understanding, that is your CV as of</p> <p>12 January 5th of 2019; is that right?</p> <p>13 A. Well, I added in my change of</p> <p>14 position since then.</p> <p>15 Q. All right. So the CV that</p> <p>16 you're looking at has a date of January 5th</p> <p>17 of 2019, but you updated it some since</p> <p>18 that -- since then, even if you haven't</p> <p>19 changed the date?</p> <p>20 A. Yes.</p> <p>21 Q. Okay.</p> <p>22 A. Just with my change in jobs,</p> <p>23 yes.</p> <p>24 Q. Is your CV that we've marked as</p> <p>25 Deposition Exhibit 56 an up-to-date résumé or</p>

66 (Pages 686 to 689)



Judith Wolf, M.D.

Page 690	Page 692
<p>1 listing of your background and your training 2 and your publications and your work 3 experience? 4 A. Pretty much. I do think there 5 may be one or two other publications that are 6 not on there that I haven't pulled out, but 7 generally, yes. 8 Q. When do you believe you last 9 updated your CV? 10 A. Well, yesterday I changed the 11 position, but I did not do a PubMed search to 12 find new publications. I'm aware there have 13 been a few, but I haven't put them on. 14 Q. So you updated it yesterday. 15 You think and believe and are testifying it's 16 up to date, other than there may be one or 17 two publications over the last year or two 18 that are not, you know, on your CV? 19 A. Yes. 20 Q. Those publications have nothing 21 to do with talcum powder or causes of ovarian 22 cancer or risk factors for ovarian cancer, 23 correct? 24 A. They do not. 25 MR. ZELLERS: All right. I</p>	<p>1 BY DR. THOMPSON: 2 Q. Well, I'm seeing now that -- 3 yeah, Table 1. 4 A. Table 1, that's on page 52. 5 Q. You know, what I'm looking at 6 may be in the supplemental tables. 7 A. They're in the back of this 8 one. 9 (Document review.) 10 BY DR. THOMPSON: 11 Q. I'm not seeing what I'm looking 12 for, so let's just move on. 13 A. Okay. 14 Q. I may come back to that in a 15 second, but... 16 Were all the plaintiffs that we 17 are discussing today frequent users? 18 A. They were. 19 Q. Were there letters to the 20 editor published in JAMA regarding the 21 O'Brien study? 22 A. Yes. 23 Q. And what were -- what was the 24 gist of those letters? 25 MR. ZELLERS: Objection, form.</p>
Page 691	Page 693
<p>1 have no further questions then, 2 subject to maybe a couple more once 3 Ms. Thompson is done. 4 THE WITNESS: Okay. Thank you. 5 ----- 6 EXAMINATION 7 ----- 8 BY DR. THOMPSON: 9 Q. Dr. Wolf, I have just a few 10 questions. We'll start with some that are 11 more general. 12 Looking at the O'Brien paper 13 that's Exhibit 20. 14 A. Got it. 15 Q. And did the O'Brien authors 16 look at frequent users of talc? 17 MR. ZELLERS: Objection, form. 18 A. I'm going to pull up -- look at 19 their -- so they looked at... 20 MR. ZELLERS: Doctor, if you 21 could tell us what page you're looking 22 at, once you start to read and are 23 testifying. 24 THE WITNESS: Yes, I will. 25 ///</p>	<p>1 BY DR. THOMPSON: 2 Q. What -- state what those 3 letters said. 4 MR. ZELLERS: Objection, form. 5 A. So there were, I believe, a 6 couple of letters that said that -- brought 7 out points that there still may not have been 8 enough patients in the study to make a clear 9 judgment that there was a positive 10 association with talc use and ovarian cancer; 11 that how they assessed -- and that 12 specifically in the serous cancers, because 13 there were more of those, there was a 14 statistically increased use, and that the -- 15 that's what I recall about... 16 BY DR. THOMPSON: 17 Q. Do you remember who wrote those 18 letters? 19 A. I remember Dr. Cramer was one 20 of the authors who wrote those letters. I 21 don't remember the others. 22 Q. Was Dr. Harlow one of those 23 authors too? 24 A. Yes, Dr. Harlow. 25 Q. And are those authors of some</p>

67 (Pages 690 to 693)

Judith Wolf, M.D.

<p style="text-align: right;">Page 694</p> <p>1 of the other papers that we've been 2 discussing? 3 A. Absolutely, yes. 4 Q. And were those letters 5 consistent with the opinions that you've 6 given regarding the O'Brien study? 7 MR. ZELLERS: Objection, form. 8 A. There -- they brought up points 9 in their letters that I -- that are 10 consistent with my opinion. 11 BY DR. THOMPSON: 12 Q. Do you remember the questions 13 that Mr. Zellers asked regarding the subtypes 14 of ovarian cancer and Health Canada's 15 conclusions? 16 A. Yes. 17 Q. And what does Health Canada 18 assessment conclude about the causation of 19 genital talcum powder use and ovarian cancer? 20 MR. ZELLERS: Objection, form. 21 A. That it's -- the conclusions of 22 Health Canada that talcum powder can cause 23 ovarian cancer. 24 BY DR. THOMPSON: 25 Q. And did Health Canada</p>	<p style="text-align: right;">Page 696</p> <p>1 that you included the strengths and not the 2 weaknesses? 3 A. I included the conclusions, not 4 strengths or weaknesses. 5 Q. Do you remember the series of 6 articles about endometriosis? 7 A. Yes. 8 Q. I believe at one point you said 9 you were not an expert in endometriosis. 10 What did you mean by that 11 statement? 12 A. Well, what I meant by that 13 statement is, in my day-to-day practice, I 14 don't medically manage endometriosis, but I 15 certainly have training in endometriosis, 16 being a board certified obstetrician 17 gynecologist. 18 And I certainly take care of 19 women who have endometriosis, because if they 20 have to have surgical extirpation, removal of 21 their female organs in order to manage their 22 endometriosis, oftentimes those patients are 23 sent to someone like me, a gynecologic 24 oncologist, because the endometriosis causes 25 such scarring that the surgeries can be very</p>
<p style="text-align: right;">Page 695</p> <p>1 assessment exclude clear-cell carcinoma? 2 A. It did not. 3 MR. ZELLERS: Objection. 4 BY DR. THOMPSON: 5 Q. Did the Health Canada 6 assessment exclude endometrioid cancer? 7 MR. ZELLERS: Objection, form. 8 A. It did not. 9 BY DR. THOMPSON: 10 Q. Did the Health Canada 11 assessment exclude any epithelial ovarian 12 cancers? 13 A. It did not. 14 Q. Dr. Zellers asked you about 15 including the strengths of the Health Canada 16 assessment in your report and not the 17 weaknesses. 18 Do you remember those 19 questions? 20 A. I do. 21 Q. Is that what you did? 22 A. I included the conclusions of 23 the Health Canada report in my report, expert 24 report. 25 Q. So that would be inaccurate,</p>	<p style="text-align: right;">Page 697</p> <p>1 difficult and risky and most gynecologists 2 are not comfortable operating on them. 3 So although I don't medically 4 treat them and I'm not usually the one who 5 does the diagnosis, although sometimes I find 6 it when I operate on women, I do take care of 7 endometriosis and -- and, therefore, have 8 clinical expertise in the area. 9 Q. What are the generally accepted 10 signs and symptoms of endometriosis? 11 A. The most common and generally 12 accepted are chronic pelvic pain, generally 13 around the time of menses or periods, 14 dyspareunia, which is pain with intercourse, 15 and infertility. 16 Q. Is a fibrocystic breast 17 condition a sign of endometriosis? 18 A. No. It's quite common changes 19 in breasts that women have. I think some 20 reports are the vast majority of women have 21 fibrocystic changes in their breasts. 22 Q. And do you remember seeing in 23 the article that Mr. Zellers showed us that 24 90% of women have fibrocystic changes in the 25 breast?</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 698</p> <p>1 A. Yes. As I said, the vast 2 majority. 3 Q. Are endometrial polyps a risk 4 for ovarian cancer? 5 A. No. 6 Q. Is a previous cesarean section 7 generally recognized as a risk factor for 8 endometriosis? 9 A. No. 10 Q. And I believe the article that 11 Mr. Zellers showed you described one 12 additional case of endometriosis every 325 13 women who had a cesarean section. 14 Did you see that? 15 A. Yes. But having a cesarean 16 section is not generally considered a risk 17 factor for endometriosis. 18 Q. Is having a cesarean section a 19 risk factor for ovarian cancer? 20 A. No. 21 Q. Is chronic low back pain a 22 common symptom of endometriosis? 23 A. No. 24 Q. Is the use of a soy supplement 25 a risk factor for ovarian cancer?</p>	<p style="text-align: right;">Page 700</p> <p>1 who I do know is a good doctor, did not see 2 any endometriosis and that two pathologists 3 saw no evidence of endometriosis. 4 So I would need to see what 5 that would be before it would have any impact 6 on my opinion. 7 BY DR. THOMPSON: 8 Q. I think you talked some about 9 the -- the amount and the circumstances 10 around the talcum powder exposure that could 11 lead you to question whether the talcum 12 powder use was a contributing factor. 13 Are there any other types of 14 pelvic cancer that you would feel like you 15 had insufficient evidence to author a 16 causation opinion for? 17 MR. ZELLERS: Objection, form. 18 A. I'm not sure what you're 19 asking. 20 BY DR. THOMPSON: 21 Q. Are there other types of 22 cancer, pelvic cancers, that you would -- 23 sorry. 24 Are there types -- let's not do 25 other types. Are there types of pelvic</p>
<p style="text-align: right;">Page 699</p> <p>1 A. No. 2 Q. Did Ms. Gallardo have 3 endometriosis, in your opinion? 4 A. No. She had none of the 5 symptoms of endometriosis. She had the 6 way -- she had surgery, how you would 7 diagnose endometriosis, and her surgeon 8 saw -- reported no evidence of endometriosis. 9 And she had pathology reviewed 10 by the pathologist where she had the surgery 11 and by Dr. Godleski, and neither one of them 12 saw any evidence of endometriosis. Nothing 13 in her history or her findings or her report 14 indicated that she had endometriosis. 15 Q. If Johnson &amp; Johnson would 16 bring to you new evidence that Ms. Gallardo 17 did, in fact, have endometriosis, would that 18 change your opinion as to whether talcum 19 powder is a cause, a contributing cause of 20 her ovarian cancer? 21 MR. ZELLERS: Objection, form. 22 A. The first thing I would need to 23 do with any new evidence would be review it 24 and see what it said. It would be hard for 25 me to imagine that her surgeon, Dr. Mutch,</p>	<p style="text-align: right;">Page 701</p> <p>1 cancer that you would not give a causation 2 opinion on, even with sufficient use of 3 talcum powder? 4 MR. ZELLERS: Objection, form. 5 A. So I would not give an opinion 6 that talcum powder use caused vulvar cancer 7 or cervix cancer or anal cancer or colon 8 cancer. 9 Is that what you're asking? 10 BY DR. THOMPSON: 11 Q. That was. Sorry. Not a very 12 good question. 13 And why would that be? 14 A. I have no evidence 15 epidemiologically or otherwise that talcum 16 powder causes those cancers. 17 Q. And are there other types of 18 actual ovarian cancer that you would put in 19 that same category? 20 A. Yeah. I believe I've stated 21 before that there's no evidence and I would 22 not give an opinion that talcum powder use 23 caused germ cell tumors of the ovary or 24 stromal tumors of the ovary or cancer 25 from somewhere else that was metastatic to</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 702</p> <p>1 the ovary, such as colon cancer or breast 2 cancer, which are cancers that commonly go to 3 the ovary. 4 Q. You reviewed Ms. Gallardo's and 5 Mr. Gallardo's testimony about 6 Ms. Gallardo's -- now I'm having trouble -- 7 talcum powder use, didn't you? 8 You reviewed their deposition 9 testimony about Ms. Gallardo's talcum powder 10 use, didn't you? 11 A. Yes, I did. 12 Q. Did you find their testimony to 13 be credible and reliable? 14 MR. ZELLERS: Objection, form. 15 A. I did. They were under oath 16 and they were consistent in what their 17 reports were with her use, and I found them 18 to be credible. 19 BY DR. THOMPSON: 20 Q. And would that be true for all 21 of the plaintiffs that we've discussed today 22 or their representative? 23 MR. ZELLERS: Objection, form. 24 A. In their depositions, I would 25 find them to be credible.</p>	<p style="text-align: right;">Page 704</p> <p>1 BY DR. THOMPSON: 2 Q. The gold standard for 3 diagnosing endometriosis is surgery. 4 That's what you've been telling 5 us throughout these two days, correct? 6 A. Yes. 7 Q. So this paper would agree with 8 your statement to that effect, correct? 9 MR. ZELLERS: Objection, form. 10 A. Yes. 11 BY DR. THOMPSON: 12 Q. And it says: In the present 13 study, we assessed the risk of gynecologic 14 cancers among women with a surgical diagnosis 15 of endometriosis. 16 So this paper used only 17 surgically diagnosed endometriosis for their 18 odds ratios; is that right? 19 A. That's correct. 20 Q. Did Ms. Bondurant have any 21 surgical confirmation of her endometriosis? 22 A. No. 23 Q. So this article would not apply 24 to Ms. Bondurant's case; she would not have 25 been included, right?</p>
<p style="text-align: right;">Page 703</p> <p>1 BY DR. THOMPSON: 2 Q. You were asked quite a few 3 questions about the one we can't pronounce, 4 the Saavalainen paper regarding ovarian 5 endometriosis and the risk of gynecological 6 cancer. 7 Do you remember that? 8 A. Yes. 9 Q. I'm going to read from the 10 second page, paragraph: The gold standard -- 11 MR. ZELLERS: I'm sorry. Which 12 study are we looking at now? 13 DR. THOMPSON: Saavalainen. 14 And it's Exhibit 37, if you want to 15 pull it up. 16 MR. ZELLERS: And which -- 17 where are you reading from on this? 18 DR. THOMPSON: I'm reading from 19 the second page of the article, and it 20 is page 2. 21 MR. ZELLERS: Yes. Right 22 column or left column? 23 DR. THOMPSON: Left column, 24 first full paragraph, that begins with 25 "The gold standard."</p>	<p style="text-align: right;">Page 705</p> <p>1 MR. ZELLERS: Objection, form. 2 A. She would not have been 3 included in this kind of study. 4 BY DR. THOMPSON: 5 Q. And obviously, Gallardo, 6 because she didn't have any kind of 7 endometriosis in your reports? 8 A. She had surgical confirmation 9 of no evidence of endometriosis. 10 Q. Did the Davis study -- you can 11 pull that out if you want, but I'm just going 12 to ask a question. 13 Did the Davis study look at 14 both dose -- I'm sorry. Start all over. 15 Did the Davis study look at 16 dose-response with both duration and 17 frequency of use? 18 A. No, they looked at it 19 separately, not together. 20 Q. Did you have that information, 21 both duration and frequency, with each of 22 these four plaintiffs that we've discussed 23 today? 24 MR. ZELLERS: Objection, form. 25 A. I did. I had the frequency of</p>

70 (Pages 702 to 705)

Judith Wolf, M.D.

Page 706	Page 708
<p>1 their use and the timing and the length of</p> <p>2 their use.</p> <p>3 BY DR. THOMPSON:</p> <p>4 Q. Is it your opinion -- first of</p> <p>5 all, one question: Were there other study --</p> <p>6 cellular studies other than the -- Dr. Saed's</p> <p>7 lab that showed malignant transformation with</p> <p>8 talc exposure of ovarian cells in culture?</p> <p>9 MR. ZELLERS: Objection, form.</p> <p>10 A. Yes. The Buz'Zard study.</p> <p>11 (Clarification requested by the</p> <p>12 stenographer.)</p> <p>13 THE WITNESS: B-U-Z-Z-A-R-D,</p> <p>14 and there's an apostrophe somewhere in</p> <p>15 there.</p> <p>16 BY DR. THOMPSON:</p> <p>17 Q. Is it your opinion that talcum</p> <p>18 powder use is a substantial and direct</p> <p>19 contributing factor in causing Ms. Gallardo's</p> <p>20 ovarian cancer?</p> <p>21 A. Yes.</p> <p>22 Q. And, in other words, that's a</p> <p>23 cause of her ovarian cancer?</p> <p>24 A. Yes.</p> <p>25 Q. Based on the evidence in</p>	<p>1 given to a reasonable degree of medical and</p> <p>2 scientific certainty?</p> <p>3 A. They are.</p> <p>4 Q. If there is new information</p> <p>5 regarding your general opinions, would it be</p> <p>6 your plan to amend your report, if indicated?</p> <p>7 A. Yes.</p> <p>8 Q. If there were any new</p> <p>9 information regarding the individual</p> <p>10 plaintiffs, would your plan be to review and</p> <p>11 amend your report, if indicated?</p> <p>12 A. Yes.</p> <p>13 Q. And would this include</p> <p>14 reviewing the defense expert reports?</p> <p>15 A. Yes.</p> <p>16 Q. And you, I think, testified</p> <p>17 that you diagnose endometriosis on occasion?</p> <p>18 A. Yes.</p> <p>19 Q. And that you would consider</p> <p>20 yourself an expert in the -- in endometriosis</p> <p>21 in women?</p> <p>22 A. Yes.</p> <p>23 DR. THOMPSON: I have no</p> <p>24 further questions.</p> <p>25 MR. ZELLERS: Just a couple of</p>
Page 707	Page 709
<p>1 Ms. Gallardo's case, is there any evidence of</p> <p>2 an unknown genetic mutation?</p> <p>3 A. No.</p> <p>4 Q. Is there any evidence of an</p> <p>5 undiagnosed endometriosis?</p> <p>6 A. No.</p> <p>7 Q. And is it your testimony that</p> <p>8 the talcum powder use of all four of these</p> <p>9 plaintiffs was a cause of their ovarian</p> <p>10 cancers?</p> <p>11 A. Yes.</p> <p>12 Q. Were -- have you been presented</p> <p>13 with anything by Mr. Zellers in the last</p> <p>14 couple of days that would cause you to change</p> <p>15 any of your general opinions?</p> <p>16 A. No.</p> <p>17 Q. Have you been presented with</p> <p>18 anything over these last two days that would</p> <p>19 cause you to change any of your case-specific</p> <p>20 opinions?</p> <p>21 A. No.</p> <p>22 Q. Do you stand by all of the</p> <p>23 opinions that are contained in your reports?</p> <p>24 A. I do.</p> <p>25 Q. And are all these opinions</p>	<p>1 follow-up questions.</p> <p>2 -----</p> <p>3 EXAMINATION</p> <p>4 -----</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. First, with respect to</p> <p>7 Ms. Bondurant and whether or not she would</p> <p>8 have fit within the Saavalainen study, we</p> <p>9 don't know, correct?</p> <p>10 I mean, in the -- if there was</p> <p>11 evidence of a surgical diagnosis of</p> <p>12 endometriosis, then she would be included in</p> <p>13 the study, correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. But there wasn't a surgical</p> <p>16 diagnosis of endometriosis.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Well, you have not seen it.</p> <p>19 That doesn't mean it doesn't exist, correct?</p> <p>20 A. There is nothing in her history</p> <p>21 that indicated that she had a surgery that</p> <p>22 diagnosed endometriosis.</p> <p>23 Q. So --</p> <p>24 A. So she would not fit into this</p> <p>25 study. She would not have been included in</p>



Judith Wolf, M.D.

Page 710	Page 712
<p>1 this study.</p> <p>2 Q. And that -- the basis for that</p> <p>3 statement is that you have not seen anything</p> <p>4 indicating that she had a surgical diagnosis</p> <p>5 of endometriosis, correct?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. She --</p> <p>8 DR. THOMPSON: Misstates her</p> <p>9 testimony.</p> <p>10 A. There's nothing in her history</p> <p>11 where she had any surgery that diagnosed</p> <p>12 endometriosis.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. The Health Canada study, where</p> <p>15 in the Health Canada study does Health Canada</p> <p>16 reach a conclusion that clear-cell ovarian</p> <p>17 cancer is causally related to talcum powder</p> <p>18 use?</p> <p>19 MS. GARBER: Object to the</p> <p>20 form.</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. They reach a conclusion that</p> <p>23 ovarian cancer is causally related to talcum</p> <p>24 powder use, and they did not exclude any of</p> <p>25 the subtypes.</p>	<p>1 the analyses limited and likely underpowered</p> <p>2 (low sample sizes).</p> <p>3 Furthermore, there's</p> <p>4 considerable uncertainty for how subgroup</p> <p>5 data should be examined, in particular for</p> <p>6 the tumor subtypes.</p> <p>7 That's what Health Canada</p> <p>8 concludes, right?</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 A. That's not a conclusion. And</p> <p>11 the very next sentence says: Therefore,</p> <p>12 subgroup analysis will not be further</p> <p>13 examined.</p> <p>14 That doesn't mean they excluded</p> <p>15 the clear-cells and endometrioid and other</p> <p>16 subtypes.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Okay. Please show me where in</p> <p>19 Health Canada the Health Canada review and</p> <p>20 assessment concludes and states that there is</p> <p>21 a causal relationship between talcum powder</p> <p>22 use and clear-cell ovarian cancer.</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. I am saying that it concludes</p> <p>25 that there is a risk of talcum powder</p>
Page 711	Page 713
<p>1 BY MR. ZELLERS:</p> <p>2 Q. Well, they certainly do. I</p> <p>3 mean, do you have Health Canada in front of</p> <p>4 you?</p> <p>5 THE WITNESS: Do you remember</p> <p>6 which number it is?</p> <p>7 THE STENOGRAPHER: 26 rings a</p> <p>8 bell.</p> <p>9 THE WITNESS: That's looking</p> <p>10 correct.</p> <p>11 A. I have it in front of me.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. All right. Health Canada, the</p> <p>14 report, the risk assessment, April 2021,</p> <p>15 concludes that the epidemiology for the</p> <p>16 subtypes is inconsistent and underpowered; is</p> <p>17 that right?</p> <p>18 And I'm looking at page 17 at</p> <p>19 the bottom, Health Canada reports tumor</p> <p>20 subtypes are one of the many subgroup</p> <p>21 analyses conducted in several of the</p> <p>22 epidemiology studies and review; however,</p> <p>23 there was very little consistency in whether</p> <p>24 or how the subgroup analyses were conducted</p> <p>25 across the available studies, thereby leaving</p>	<p>1 and ovarian -- epithelial ovarian cancer, and</p> <p>2 they did not exclude clear-cell and</p> <p>3 endometrioid.</p> <p>4 What they did not do is look at</p> <p>5 those subgroups separately.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. Nowhere in the Health Canada</p> <p>8 report does it specifically or expressly say</p> <p>9 that Health Canada concluded that there was a</p> <p>10 causal association between talcum powder use</p> <p>11 and clear-cell carcinoma, ovarian cancer,</p> <p>12 correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. What it says is that there's an</p> <p>15 association of talcum powder use and</p> <p>16 epithelial ovarian cancer, and the studies</p> <p>17 that they looked at included all types of</p> <p>18 epithelial ovarian cancer; and, therefore,</p> <p>19 clear-cell and endometrioid are in that.</p> <p>20 They don't say that clear-cell</p> <p>21 and endometrioid are not caused by talcum</p> <p>22 powder use. What they did not do is</p> <p>23 separately look at them.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. What they said is that with</p>

72 (Pages 710 to 713)

Judith Wolf, M.D.

<p style="text-align: right;">Page 714</p> <p>1 subtypes -- and subtypes would be 2 endometrioid, would be mucinous, would be 3 clear-cell ovarian cancer, correct? 4 A. Yes, those are some of the 5 subtypes. 6 Q. All right. It says the 7 epidemiology for the subtypes is inconsistent 8 and underpowered. 9 They say that, right? 10 A. Given as a reason for why they 11 did not look at those separately. 12 Q. Right. But they do say that, 13 correct? 14 A. In the -- they say that, given 15 the reason that that's why they did not look 16 at them separately, but they did not take 17 them out of the studies where they were 18 included and discard them. 19 Q. They say that for the subtypes, 20 the epidemiology is inconsistent, it's 21 underpowered, and, therefore, there's 22 considerable uncertainty for how subgroup 23 data should be examined, in particular, the 24 tumor subtypes. Therefore, they're not going 25 to analyze the subtypes in this assessment.</p>	<p style="text-align: right;">Page 716</p> <p>1 point me to where it says we found a causal 2 association between talcum powder use and 3 clear-cell carcinoma ovarian cancer. 4 A. What it says is that there's a 5 causal association between epithelial ovarian 6 cancer and talcum powder use. 7 What this is saying that you're 8 showing is that they're not separating them 9 out and looking at all the subtypes 10 individually. They're looking at a whole, 11 including all of the subtypes. 12 Q. All right. If you can, I'm 13 going to try to ask a really precise question 14 and I'd like you just to answer it. 15 Is there anywhere that you see 16 in the Health Canada risk assessment that 17 Health Canada expressly states that there is 18 a causal association between talcum powder 19 use and clear-cell ovarian cancer? 20 Can we find those words in 21 here? 22 DR. THOMPSON: Object to form. 23 A. Those words may not be in here, 24 but what is in here is that epithelial 25 ovarian cancer can be caused by talcum powder</p>
<p style="text-align: right;">Page 715</p> <p>1 Is that what it says? 2 DR. THOMPSON: Objection. 3 Asked and answered. 4 MR. ZELLERS: Okay. 5 BY MR. ZELLERS: 6 Q. Is that what it says, Doctor? 7 A. No, that's not what it says. 8 DR. THOMPSON: That's not what 9 it says. 10 A. That's not what it says. It 11 says that they're not going to look at just 12 the subgroup analysis. 13 So in the studies where they 14 separated out the subtypes, they're not 15 looking at those specific subanalyses, but 16 they're looking at the study as a whole, 17 which includes all of the subtypes. 18 BY MR. ZELLERS: 19 Q. All right. Well, nowhere do 20 they separate out and find a causal 21 association between talcum powder use and 22 clear-cell ovarian cancer, correct? 23 DR. THOMPSON: Object to form. 24 BY MR. ZELLERS: 25 Q. There's nowhere in here you can</p>	<p style="text-align: right;">Page 717</p> <p>1 use, and that analysis came from looking at 2 the studies that include all the subtypes of 3 ovarian cancer. 4 BY MR. ZELLERS: 5 Q. And I understand that's your 6 position. Two more questions. 7 Nowhere within the Health 8 Canada risk assessment is there an express 9 statement that Health Canada found a causal 10 association between talcum powder use and 11 endometrioid ovarian cancer, correct? 12 DR. THOMPSON: Object to form. 13 A. Same answer as the other one -- 14 BY MR. ZELLERS: 15 Q. Last -- 16 A. -- that that is included in 17 their conclusions because the studies 18 included all of the subtypes. 19 Q. Last question. And this is 20 with respect to mucinous ovarian cancer. 21 There's no express statement in 22 the Health Canada risk assessment that 23 there's a causal association or that they 24 found a causal association between talcum 25 powder use and mucinous ovarian cancer.</p>

73 (Pages 714 to 717)

Judith Wolf, M.D.

<p style="text-align: right;">Page 718</p> <p>1 Those words are not in this document, 2 correct?</p> <p>3 A. The statement is that 4 epithelial ovarian cancer has a causal 5 association with talcum powder use, and that 6 is in assessing the studies that included all 7 of the subtypes, including clear-cell and 8 endometrioid and mucinous.</p> <p>9 Q. And I understand that's your 10 position, and my question is: They don't 11 expressly find a causal association with 12 clear-cell, with mucinous, with endometrioid 13 ovarian cancer, but you believe that that 14 would be subsumed within their statement 15 relating to epithelial ovarian cancer, 16 correct?</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. It would be, because the 19 studies included all of the subtypes.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. But you do agree with me that 22 those words, mucinous, endometrioid, 23 clear-cell ovarian cancer, are not contained 24 within the Health Canada assessment, correct? 25</p> <p>DR. THOMPSON: Object to form.</p>	<p style="text-align: right;">Page 720</p> <p>1 A. Yes.</p> <p>2 Q. And your recollection is that 3 at least some of the folks who wrote in said 4 maybe there's not enough power or not enough 5 patients included in the -- in the study; is 6 that right?</p> <p>7 A. Yes.</p> <p>8 Q. You, though, addressed in your 9 report, as we talked about -- you talked 10 about there may be a need for as many -- as 11 many as 200,000 women to study this issue, 12 and you're referring to Narod; and I'm 13 looking at your amended report, page 6.</p> <p>14 A. Yes.</p> <p>15 Q. And, in fact, O'Brien included 16 over 250,000 women; is that right?</p> <p>17 A. Yes.</p> <p>18 Q. All right. Let me just check 19 one thing.</p> <p>20 Last question -- couple of 21 questions.</p> <p>22 Are all of the opinions that 23 you anticipate testifying to at trial or any 24 hearing, you know, as of today based upon the 25 information you reviewed contained in the</p>
<p style="text-align: right;">Page 719</p> <p>1 A. I don't know if the words 2 mucinous, clear-cell and endometrioid ovarian 3 cancer are contained in here. I'm assuming 4 that they are.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Understood.</p> <p>7 And what I mean is there's no 8 statement, at least that you have seen here, 9 expressly determining that there is a causal 10 association between talcum powder use and any 11 of those three subtypes, clear-cell, mucinous 12 and endometrioid ovarian cancer, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. Because they did not look at 15 them separately. They looked at it as a 16 whole.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Okay. Last question or two.</p> <p>19 In your report, Ms. Thompson 20 asked you a couple of questions about O'Brien 21 and some of the letters to the editor, and 22 whether or not O'Brien was sufficiently 23 powered to allow for there to be a finding of 24 an association.</p> <p>25 Do you recall those questions?</p>	<p style="text-align: right;">Page 721</p> <p>1 reports that we've marked as an exhibit to 2 the deposition and in the testimony that 3 you've provided?</p> <p>4 A. Yes.</p> <p>5 Q. All of the materials that you 6 considered and are relying on for your 7 opinions, you know, as of today are contained 8 in what we marked as Exhibit 5, your 9 materials considered and scientific authority 10 list as supplemented in each of the 11 case-specific reports as well?</p> <p>12 MS. GARBER: Object to the 13 form.</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. If you can't answer, I'm going 17 to ask it another way.</p> <p>18 Is there anything you can think 19 of today that you've reviewed or that you're 20 relying on in terms of formulating your 21 opinions other than what, you know, is 22 contained on your materials list?</p> <p>23 MS. GARBER: Object to the 24 form.</p> <p>25 A. There's nothing that I can</p>

Judith Wolf, M.D.

<p style="text-align: right;">Page 722</p> <p>1 think of today that I considered that it has</p> <p>2 not been presented in the lists and the</p> <p>3 information that I've shown.</p> <p>4 MR. ZELLERS: Thank you for</p> <p>5 your patience. I have no further</p> <p>6 questions.</p> <p>7 DR. THOMPSON: I'm going to</p> <p>8 follow up a little with Health Canada.</p> <p>9 I apologize for that, but -- I'm not</p> <p>10 apologizing for that. Never mind.</p> <p>11 -----</p> <p>12 EXAMINATION</p> <p>13 -----</p> <p>14 BY DR. THOMPSON:</p> <p>15 Q. Okay. Let's look at a few</p> <p>16 places in Health Canada. We'll start with</p> <p>17 (iii).</p> <p>18 A. (iii), that's the beginning.</p> <p>19 MR. ZELLERS: What page?</p> <p>20 THE WITNESS: (iii). That's</p> <p>21 the beginning.</p> <p>22 BY DR. THOMPSON:</p> <p>23 Q. And I'm reading the last -- the</p> <p>24 next-to-the-last paragraph: With regards to</p> <p>25 perineal exposure, analyses of the available</p>	<p style="text-align: right;">Page 724</p> <p>1 Q. And did the epidemiological</p> <p>2 studies that Health Canada referred to as</p> <p>3 consistent and statistically significant in a</p> <p>4 positive association often include subtypes?</p> <p>5 MR. ZELLERS: Objection, form,</p> <p>6 misstates the evidence, misstates</p> <p>7 testimony.</p> <p>8 MS. GARBER: Is that a speaking</p> <p>9 objection?</p> <p>10 DR. THOMPSON: It sounded like</p> <p>11 it, didn't it?</p> <p>12 MR. ZELLERS: It's a California</p> <p>13 objection where we give the bases for</p> <p>14 our form objection.</p> <p>15 MS. GARBER: Oh. I've been</p> <p>16 here --</p> <p>17 MR. ZELLERS: As Ms. Garber</p> <p>18 knows that.</p> <p>19 MS. GARBER: -- all day long,</p> <p>20 so let me start over with my</p> <p>21 objections.</p> <p>22 A. So the answer to the question</p> <p>23 is that the studies included epithelial</p> <p>24 ovarian cancer. Some of them said all the</p> <p>25 subtypes. Some of them just called it</p>
<p style="text-align: right;">Page 723</p> <p>1 human studies in the peer-reviewed literature</p> <p>2 indicate a consistent and statistically</p> <p>3 significant positive association between</p> <p>4 perineal exposure to talc and ovarian cancer.</p> <p>5 The available data, meaning the epidemiology</p> <p>6 studies that we've gone over --</p> <p>7 MR. ZELLERS: Well, objection</p> <p>8 to --</p> <p>9 DR. THOMPSON: Sorry. Sorry.</p> <p>10 MR. ZELLERS: -- your</p> <p>11 editorializing.</p> <p>12 DR. THOMPSON: Yeah. You're</p> <p>13 right. You're right.</p> <p>14 MR. ZELLERS: You can read it,</p> <p>15 but that's okay.</p> <p>16 BY DR. THOMPSON:</p> <p>17 Q. The available data are</p> <p>18 indicative of a causal effect.</p> <p>19 Referring to the association</p> <p>20 between perineal exposure to talc and ovarian</p> <p>21 cancer, would the subtypes be included as</p> <p>22 ovarian cancer in that statement?</p> <p>23 MR. ZELLERS: Objection, form.</p> <p>24 A. Yes.</p> <p>25 BY DR. THOMPSON:</p>	<p style="text-align: right;">Page 725</p> <p>1 epithelial ovarian cancer. And they were</p> <p>2 included in the analysis that led to this</p> <p>3 conclusion.</p> <p>4 BY DR. THOMPSON:</p> <p>5 Q. And let's look at page 17, and</p> <p>6 in -- on page 17 --</p> <p>7 Okay. Let's not look at 17.</p> <p>8 Let's look at page 36.</p> <p>9 A. Okay.</p> <p>10 Q. We've already looked at 17.</p> <p>11 On page 36, the last, I think,</p> <p>12 full sentence of the first paragraph:</p> <p>13 Overall, there's a high degree of consistency</p> <p>14 in the epidemiological studies across several</p> <p>15 decades conducted in different parts of the</p> <p>16 world. Although there are uncertainties</p> <p>17 related to bias, there's confidence in the</p> <p>18 robustness of the available database for use</p> <p>19 in characterizing ovarian cancer risk</p> <p>20 attributed to talc exposure. Furthermore,</p> <p>21 the available data are indicative of a causal</p> <p>22 relationship.</p> <p>23 Does the ovarian cancer</p> <p>24 referred to in that clause include the</p> <p>25 subtypes?</p>

75 (Pages 722 to 725)

Judith Wolf, M.D.

<p style="text-align: right;">Page 726</p> <p>1 MR. ZELLERS: Objection, form.</p> <p>2 A. It includes epithelial ovarian</p> <p>3 cancer, which would include all subtypes.</p> <p>4 BY DR. THOMPSON:</p> <p>5 Q. And then let's go to another</p> <p>6 place. I don't have the page number, so let</p> <p>7 me look this up real quick. Okay.</p> <p>8 DR. THOMPSON: My Internet went</p> <p>9 out on me. Sorry.</p> <p>10 (Pause.)</p> <p>11 BY DR. THOMPSON:</p> <p>12 Q. Okay. Let's go to page 43.</p> <p>13 The paragraph that begins with "Based on the</p> <p>14 available data."</p> <p>15 A. (Nods head.)</p> <p>16 Q. Based on the available data,</p> <p>17 ovarian cancer was identified as a critical</p> <p>18 health effect for the perineal route of</p> <p>19 exposure to talc, and a long discussion of</p> <p>20 why that is.</p> <p>21 Data from a meta-analysis of</p> <p>22 epidemiological studies indicate a consistent</p> <p>23 and statistically significant positive</p> <p>24 association between perineal exposure to talc</p> <p>25 and ovarian cancer, with several references.</p>	<p style="text-align: right;">Page 728</p> <p>1 CERTIFICATE</p> <p>2 I, MICHAEL E. MILLER, Fellow of</p> <p>3 the Academy of Professional Reporters,</p> <p>4 Registered Diplomat Reporter, Certified</p> <p>5 Realtime Reporter, Certified Court Reporter</p> <p>6 and Notary Public, do hereby certify that</p> <p>7 prior to the commencement of the examination,</p> <p>8 JUDITH WOLF, M.D. was duly sworn by me to</p> <p>9 testify to the truth, the whole truth and</p> <p>10 nothing but the truth.</p> <p>11 I DO FURTHER CERTIFY that the</p> <p>12 foregoing is a verbatim transcript of the</p> <p>13 testimony as taken stenographically by and</p> <p>14 before me at the time, place and on the date</p> <p>15 hereinbefore set forth, to the best of my</p> <p>16 ability.</p> <p>17 I DO FURTHER CERTIFY that pursuant</p> <p>18 to FRCP Rule 30, signature of the witness was</p> <p>19 not requested by the witness or other party</p> <p>20 before the conclusion of the deposition.</p> <p>21 I DO FURTHER CERTIFY that I am</p> <p>22 neither a relative nor employee nor attorney</p> <p>23 nor counsel of any of the parties to this</p> <p>24 action, and that I am neither a relative nor</p> <p>25 employee of such attorney or counsel, and</p> <p>that I am not financially interested in the</p> <p>action.</p> <p>MICHAEL E. MILLER, FAPR, RDR, CRR</p> <p>Fellow of the Academy of Professional Reporters</p> <p>NCRA Registered Diplomat Reporter</p> <p>NCRA Certified Realtime Reporter</p> <p>Certified Court Reporter</p> <p>Notary Public in and for the</p> <p>State of Texas</p> <p>My Commission Expires: 7/9/2024</p> <p>Dated: September 16, 2021</p>
<p style="text-align: right;">Page 727</p> <p>1 Would the ovarian cancer</p> <p>2 referred to in that clause include all the</p> <p>3 subtypes of epithelial ovarian cancer?</p> <p>4 MR. ZELLERS: Objection, form.</p> <p>5 A. Yes, because those papers that</p> <p>6 they discussed, many of them include all</p> <p>7 subtypes or don't separate and just call it</p> <p>8 epithelial ovarian cancer.</p> <p>9 BY DR. THOMPSON:</p> <p>10 Q. And the last sentence: Given</p> <p>11 that there's a potential for perineal</p> <p>12 exposure to talc from the use of various</p> <p>13 self-care products, a potential concern for</p> <p>14 human health has been identified.</p> <p>15 And that would include all the</p> <p>16 subtypes of epithelial ovarian cancer?</p> <p>17 MR. ZELLERS: Objection, form.</p> <p>18 BY DR. THOMPSON:</p> <p>19 Q. Is that right?</p> <p>20 A. Yes.</p> <p>21 DR. THOMPSON: That's all.</p> <p>22 MR. ZELLERS: I have no further</p> <p>23 questions. Thank you.</p> <p>24 THE WITNESS: Thank you.</p> <p>25 (Time noted: 4:41 p.m. CDT)</p>	<p style="text-align: right;">Page 729</p> <p>1 INSTRUCTIONS TO WITNESS</p> <p>2</p> <p>3 Please read your deposition over</p> <p>4 carefully and make any necessary corrections.</p> <p>5 You should state the reason in the</p> <p>6 appropriate space on the errata sheet for any</p> <p>7 corrections that are made.</p> <p>8 After doing so, please sign the</p> <p>9 errata sheet and date it.</p> <p>10 You are signing same subject to</p> <p>11 the changes you have noted on the errata</p> <p>12 sheet, which will be attached to your</p> <p>13 deposition.</p> <p>14 It is imperative that you return</p> <p>15 the original errata sheet to the deposing</p> <p>16 attorney within thirty (30) days of receipt</p> <p>17 of the deposition transcript by you. If you</p> <p>18 fail to do so, the deposition transcript may</p> <p>19 be deemed to be accurate and may be used in</p> <p>20 court.</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>

76 (Pages 726 to 729)



Judith Wolf, M.D.

Page 730	Page 732
<div style="text-align: center;">ERRATA</div> <div style="text-align: center;">PAGE LINE CHANGE</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div> <div style="text-align: center;">REASON: _____</div>	<div style="text-align: center;">LAWYER'S NOTES</div> <div style="text-align: center;">PAGE LINE</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div> <div style="text-align: center;">_____</div>
<div style="text-align: center;">Page 731</div> <div style="text-align: center;">ACKNOWLEDGMENT OF DEPONENT</div> <p>I, JUDITH WOLF, M.D., do hereby certify that I have read the foregoing pages and that the same is a correct transcription of the answers given by me to the questions therein propounded, except for the corrections or changes in form or substance, if any, noted in the attached Errata Sheet.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;">JUDITH WOLF, M.D.</div> <div style="width: 45%;">DATE _____</div> </div> <p>Subscribed and sworn to before me this _____ day of _____, 20 ____.</p> <p>My commission expires: _____</p> <p>_____ Notary Public</p>	

77 (Pages 730 to 732)

<b>A</b>				
<b>a.m</b>	729:19	684:5	506:8 507:11,23	592:22
429:19 436:3	<b>acknowledge</b>	<b>Advancing</b>	508:22 509:8	<b>ambiguous</b>
508:19,20 575:6	548:3 651:21	577:14	511:13 513:20	499:3 501:17
<b>abdomen</b>	<b>acknowledged</b>	<b>advise</b>	516:22 524:1	<b>amend</b>
465:6	547:24 651:22	459:8	539:14,23 540:9	525:6 708:6,11
<b>abdominal</b>	<b>ACKNOWLEDG...</b>	<b>affect</b>	540:13 541:2,5,7	<b>amended</b>
512:19,22	432:16 731:1	455:25	541:10 581:4	437:7 574:8 575:24
<b>ability</b>	<b>act</b>	<b>African</b>	583:4 604:1 605:3	610:4 641:8
553:2 728:9	568:25	643:21,24 644:3,11	605:6,7 613:15,21	720:13
<b>able</b>	<b>action</b>	644:14,16,20	626:15 644:9	<b>American</b>
478:13 482:13,17	728:14,16	645:4,10 646:6,16	649:25 650:25	643:24 644:3,11,14
490:19 504:23	<b>active</b>	646:21 647:6,9	651:1 675:24	644:16,20 645:4
534:14 535:24	586:1	648:11,18,20	677:4 684:7 704:7	645:10 646:6,16
537:9 543:22	<b>activities</b>	649:15 650:21	718:21	646:21 647:6,9
566:23 606:18,23	669:8	651:8,14,23 652:3	<b>agreed</b>	648:11,18,20
626:3 655:20	<b>activity</b>	652:7,11 653:18	438:21 517:1 518:3	649:15 650:21
684:22 686:21	556:11	653:20,22,24	646:1 675:12,20	651:8,14,23 652:4
687:5,24 689:3	<b>actual</b>	654:6 655:1,11	677:13 680:16	652:7,11 653:18
<b>abnormalities</b>	518:16 701:18	<b>African-American</b>	<b>agreement</b>	653:21,23,25
502:23 570:1	<b>acute</b>	643:15	485:18 488:24	654:6 655:1,11
<b>abraded</b>	556:3 558:17 559:3	<b>age</b>	489:8 534:12	<b>Americans</b>
662:10	559:8 663:11,13	440:19 455:21	<b>Ah</b>	643:21
<b>absence</b>	663:16,25 664:6	521:8,17 522:25	643:2	<b>amount</b>
515:11	<b>add</b>	523:12 530:20,23	<b>ahead</b>	515:20 531:5 550:4
<b>absolute</b>	484:4 491:25	532:16 577:10,12	655:18	550:5,16,21,25
539:18 540:10	<b>added</b>	577:14,16,21,22	<b>al</b>	551:20 609:7
<b>Absolutely</b>	689:13	577:24 578:6,9,14	429:12 433:13,16	632:17,21 700:9
694:3	<b>addition</b>	606:2,10 613:5,8	433:19,23 434:12	<b>amounts</b>
<b>abstract</b>	533:13	613:8,11,12,15	434:20 480:15	561:17,18 565:10
490:10,21 491:4	<b>additional</b>	621:16 623:1	482:8 490:5	565:11
643:18 644:24	460:19 492:6	632:1 680:1	497:24 640:24	<b>anal</b>
645:1 650:19	531:14 621:10	<b>agent</b>	667:7	701:7
667:18	660:24 661:3	663:1	<b>Alabama</b>	<b>analogy</b>
<b>Academy</b>	698:12	<b>aggressive</b>	430:4	516:17 526:24
429:20 728:2,19	<b>Additionally</b>	607:7,9	<b>alive</b>	545:9
<b>accept</b>	457:3	<b>ago</b>	444:20	<b>analyses</b>
466:24	<b>addressed</b>	452:22 537:24	<b>alleges</b>	644:3 711:21,24
<b>accepted</b>	720:8	544:9 589:16	552:2	712:1 722:25
467:14 697:9,12	<b>adequate</b>	592:9 593:25	<b>allele</b>	<b>analysis</b>
<b>access</b>	523:6 633:23	<b>agree</b>	526:15	492:12,16 546:8,10
515:21 553:9	<b>adolescence</b>	440:9,10 446:13	<b>ALLEN</b>	567:19 712:12
<b>accidental</b>	454:15	447:3 448:22	430:2	715:12 717:1
622:16	<b>adopted</b>	457:22 458:1	<b>allow</b>	725:2
<b>accurate</b>	660:4	461:6 469:14	719:23	<b>analyze</b>
520:21 625:9,18	<b>adulthood</b>	493:15 494:19	<b>allowed</b>	515:23 714:25
	454:15	495:8 499:11,14	449:22	<b>analyzed</b>
	<b>adults</b>	501:19 503:17	<b>allowing</b>	485:8 567:21,22

681:2	632:18 670:3	<b>article</b>	645:25 653:3,11	476:5 480:13
<b>anatomy</b>	<b>anyone's</b>	470:13 474:18	653:13 654:9,21	484:19 485:9,21
581:1	577:24	497:13,14,21	668:7,10,14	487:12,20 488:6
<b>and/or</b>	<b>anytime</b>	498:3 537:23,23	669:18 673:2	488:16,17 489:3
557:16 568:21	563:13 688:15	580:19,23,24	677:24 678:9	489:10,21 491:16
585:1 598:9,9	<b>anyway</b>	583:4 640:17	680:9 682:24	492:23 493:4,16
<b>Anderson</b>	570:6 602:20	643:13 645:13	685:19 686:13	493:20 495:11
445:6	<b>apologize</b>	662:23,24 666:25	687:2 694:13	498:19 500:1,7,8
<b>Angeles</b>	530:6 722:9	667:11 697:23	695:14 703:2	500:11,21,24
430:19	<b>apologizing</b>	698:10 703:19	715:3 719:20	501:6 538:23
<b>Annette</b>	722:10	704:23	<b>asking</b>	539:12 540:6
619:18,21 656:20	<b>apostrophe</b>	<b>articles</b>	447:21 505:25	542:9 544:11,14
<b>Annise</b>	706:14	580:18 696:6	509:2 520:25	544:23 545:10,22
619:18	<b>appear</b>	<b>asbestiform</b>	535:2,12,14 536:6	546:4,18 547:16
<b>answer</b>	599:18	562:23	536:10 557:24	582:14 583:5,13
432:22,23 468:10	<b>appearance</b>	<b>asbestos</b>	611:18 658:8	583:17 652:6,11
481:6,8,13,16	662:11	505:17 560:17,23	673:5,5,14 700:19	652:13 667:19
496:16 497:5	<b>appears</b>	561:17 562:3,7,13	701:9	668:16 693:10
499:23 500:13	603:21 616:23	562:17 563:1,5,10	<b>assess</b>	713:10,15 715:21
503:21 507:22,23	<b>application</b>	563:14,19,21,22	514:22 537:19	716:2,5,18 717:10
519:17,21,24	554:23	564:2,5,14,15,19	546:7 671:16	717:23,24 718:5
520:3 534:21	<b>applied</b>	564:23,25 565:5	681:21 682:8	718:11 719:10,24
541:14 558:24	509:9 553:2,4	565:10 566:1,9,11	687:16	723:3,19 724:4
559:3 570:14	580:3 585:15	566:13,15 567:12	<b>assessed</b>	726:24
581:9 590:13	633:11	567:23 587:3,12	470:21 550:15	<b>associations</b>
591:9 592:22	<b>apply</b>	587:17,19 588:14	670:21 682:14	540:21 541:1,19
601:24 617:10	508:23 704:23	588:24 599:20	693:11 704:13	650:22
619:20,24 653:15	<b>approach</b>	637:21	<b>assessing</b>	<b>assume</b>
656:22 670:24	522:15 553:15	<b>ascribe</b>	718:6	458:3 460:13
677:9,25 679:1	<b>approached</b>	534:14 535:6	<b>assessment</b>	465:20 484:11,15
716:14 717:13	681:14	537:15	549:1 550:2 551:4	522:17,19,24
721:16 724:22	<b>appropriate</b>	<b>ascribes</b>	661:1,5 694:18	538:18,19 553:15
<b>answered</b>	729:6	517:3	695:1,6,11,16	553:20 554:2
459:17 461:1,2	<b>approximately</b>	<b>ASHLEY</b>	711:14 712:20	568:2 574:21
519:19 540:12	473:11 584:4	430:12	714:25 716:16	635:14 660:3,8,10
564:21 601:12,13	<b>April</b>	<b>aside</b>	717:8,22 718:24	<b>assuming</b>
653:3,11,13 654:9	711:14	673:13 677:17,20	<b>associated</b>	482:22 494:14
654:22 673:2	<b>area</b>	<b>asked</b>	453:10,13,16,17	502:14 549:16
677:24 678:9	476:5 552:9 580:3	459:17 460:25	457:1 459:3 471:6	663:19 719:3
680:9 685:19	633:5 662:5,6,16	466:3 496:10	475:23 477:22	<b>assumption</b>
686:13 687:2	663:19 697:8	534:10 564:21	478:3 502:12,25	522:10 537:2
715:3	<b>argue</b>	570:13 571:13	503:2 504:1,3	563:13
<b>answers</b>	448:7	583:3,22 585:20	546:23 547:2,4	<b>assumptions</b>
520:2 731:5	<b>arriving</b>	588:13 601:11	600:23 637:22	585:7
<b>anticipate</b>	599:3	617:6 621:3 622:5	667:23 682:12	<b>Athens</b>
609:6 610:9 720:23	<b>arthritis</b>	622:13 628:16	<b>association</b>	430:14
<b>anybody</b>	555:25	642:8,11,14,21	433:11 450:16	<b>atomic</b>

572:5 <b>attached</b> 729:12 731:7 <b>attempt</b> 584:1 631:20 632:16 <b>attempted</b> 549:5 583:23 <b>attorney</b> 728:13,15 729:16 <b>attorneys</b> 574:1 589:20 590:3 591:7 628:16 <b>attribute</b> 493:14 519:5 536:16 540:20 687:25 <b>attributed</b> 725:20 <b>aunt</b> 439:11,19 440:17 441:10 442:25 443:4,7 444:21 445:14,16,19 446:4,10,11,18 458:5 460:1 578:25 579:7 618:14 620:8 656:12,15,18 657:6,14,16,25 658:12,16,19 659:11,19 660:5 660:11,19 <b>aunt's</b> 660:20 <b>Austin</b> 429:19 <b>author</b> 470:18 700:15 <b>authority</b> 721:9 <b>authors</b> 471:5 474:23 475:5 475:9 490:23 498:6 499:7,8,12 501:3,3,11,14 538:20 539:16	540:15 541:20 640:18 643:10,22 644:5,17 645:6 649:11 650:3,18 651:21 652:3,5 662:25 665:12 667:17 691:15 693:20,23,25 <b>authors'</b> 646:1 648:7 649:2 <b>available</b> 481:25 485:8 514:18,22 567:19 711:25 722:25 723:5,17 725:18 725:21 726:14,16 <b>Avenue</b> 430:13 <b>average</b> 549:18 577:16 606:10 613:7 684:4 <b>aware</b> 448:1 464:2,20 476:21,25 478:16 479:18 492:20 493:7 506:6 549:16 556:14 562:19 563:9 567:17 570:21 589:6,8 594:7,10 602:16 614:19 616:7 625:20 637:19 641:12 661:9 662:17 664:5,17 666:2 668:19 669:6,15 690:12 <hr/> <b>B</b> <hr/> <b>B-U-Z-Z-A-R-D</b> 706:13 <b>baby</b> 549:13 567:21 568:14 569:12,15 569:16 585:22 589:9 599:12	<b>back</b> 512:23 518:2 519:15 520:13 526:24 537:22 542:5 562:21 566:16 575:3 582:10,13 607:4 629:10 655:19,20 674:12 692:7,14 698:21 <b>background</b> 494:17 531:19 643:18 690:1 <b>bacterial</b> 666:19 <b>Ball</b> 656:15,25 657:4 <b>banned</b> 666:3,6 <b>Baptist</b> 615:11 659:5 <b>basal</b> 453:18 454:14 455:19,20 456:18 586:14 <b>based</b> 479:19 501:4 511:7 529:10 598:22 624:20 639:25 706:25 720:24 726:13,16 <b>baseline</b> 667:19,22 668:9 <b>bases</b> 724:13 <b>basis</b> 509:25 681:3,5 710:2 <b>bath</b> 580:24 <b>Beach</b> 430:9 <b>BEASLEY</b> 430:2 <b>began</b> 570:10 <b>beginning</b>	557:23 656:4 722:18,21 <b>begins</b> 703:24 726:13 <b>behalf</b> 436:16 <b>believe</b> 438:21,25 439:18 465:14 466:6 468:16,20 479:2 480:21 495:4,5 496:21 502:21 509:19 517:1 523:2 527:6 539:20,21 546:16 546:20 548:6,17 548:23 550:19 552:16 553:14,17 561:7 562:20 566:3,10 569:6,19 571:3,21 572:1,8 573:2 579:19,23 580:13 581:13 584:18 585:25 586:5 590:23 604:10 606:24 607:2 611:25 617:20 627:21 628:7,11 631:16 634:1 635:8 636:20,24 650:6 650:15 675:16 681:17 682:2 690:8,15 693:5 696:8 698:10 701:20 718:13 <b>bell</b> 711:8 <b>benefit</b> 540:4 <b>benign</b> 440:5 453:20,24 454:1,12 455:4 456:8,8,11,22 457:12,16 <b>Berge</b> 492:21	<b>best</b> 607:4,22 728:9 <b>better</b> 501:20,25 502:6,11 504:24 533:5,6 536:13 543:9 560:13 628:25 654:4 <b>beyond</b> 547:21 624:10 <b>bias</b> 553:11,24 554:3 725:17 <b>BIDDLE</b> 431:2 <b>bigger</b> 465:6 <b>bilateral</b> 460:23 <b>biological</b> 619:8 620:20 621:4 621:4 665:15 <b>biomarker</b> 540:23 541:11 <b>bit</b> 508:13,16 537:24 <b>bladder</b> 512:24 513:12 <b>BLASINGAME</b> 430:12 <b>blisters</b> 662:12 <b>bloating</b> 512:20,22 <b>block</b> 516:10,10,13,15 622:3 <b>blocks</b> 515:19,22 595:20 595:23 596:16 597:4 634:14 635:2,18 636:3 638:1 <b>blood</b> 601:2,18 602:2 621:7 625:15,19 626:2,4 639:2
---	--	--	---	--

660:1,6,12	574:2,5 704:24	493:8 508:7,10	<b>C5</b>	447:17,19,25
<b>blurted</b>	<b>Bone</b>	536:16 575:3	636:3	448:25 449:1
530:6	597:23	609:3,7,12,15	<b>calcium</b>	450:7,12,13,22
<b>board</b>	<b>born</b>	621:21 646:1	597:10,14,20,23,24	451:7,19,23 452:2
696:16	623:7,11	682:17	600:1,8 638:14	452:11,24 453:11
<b>body</b>	<b>bottles</b>	<b>breast</b>	<b>California</b>	453:12,16,23,24
433:22 455:18	567:13,18,25 568:1	439:15,20 440:11	430:9,19 724:12	454:10,19 455:2,2
456:1 497:23	568:7	440:16,20,24	<b>call</b>	456:21,24,25
541:22 552:5,9	<b>bottom</b>	441:10 443:4	509:19,20 510:3	457:21 458:5,6,7
555:11 582:7	538:11 596:25	444:23 446:5,10	514:7 540:6	459:12,15,19
585:15 600:6	619:1 711:19	446:18 447:14,15	577:21 589:13,19	460:1,2,3,11,12
613:20 633:11	<b>bowel</b>	458:6 460:2,11	589:21,24 590:6	460:16 461:6,12
636:17 638:7	512:24 513:5	579:1,8 618:14	591:15 592:15,18	461:15 462:5,7
663:25 664:7	<b>box</b>	619:24 620:8	727:7	468:3 469:17,20
665:9,13	619:5	623:3 624:3	<b>called</b>	470:14,22 471:9
<b>body's</b>	<b>Bradford</b>	626:18 627:15	455:19 510:11	471:19 472:1,15
531:20 552:24	492:12,15 508:23	656:12,16,20	563:23 724:25	472:22 473:2,17
<b>bombs</b>	509:1,8,20 510:2	657:4,6,15,16,25	<b>calling</b>	474:4,10,13,21
572:5	<b>brain</b>	658:4,12,16,20	479:22	475:1,20,25 476:3
<b>Bondurant</b>	453:19 454:18	659:12 660:11	<b>Canada</b>	476:4,24 477:18
436:15,19 437:3,10	455:1	697:16,25 702:1	694:17,22,25 695:5	478:18 479:11,13
441:6 454:16	<b>BRCA</b>	<b>breasts</b>	695:10,15,23	480:14 482:8
457:24 461:22	441:7 516:14 518:5	697:19,21	710:14,15,15	483:6,8,23 484:14
462:10 464:3,13	518:5,7,8 523:22	<b>bring</b>	711:3,13,19 712:7	485:7,10,20,21
469:15 509:15	523:24 524:3,6	481:3 699:16	712:19,19 713:7,9	486:5,8 487:13,21
542:3,11,16 547:6	525:24 526:7,15	<b>broad</b>	716:16,17 717:8,9	488:7,12 489:2,4
548:22 549:7	526:25 527:14,16	503:21	717:22 718:24	489:21 490:5,15
551:21 555:6	528:13,22 530:10	<b>broader</b>	722:8,16 724:2	491:17 492:17,24
560:11 567:9,14	530:11 532:14,17	675:17	<b>Canada's</b>	493:17 494:21
568:8 572:9,18	624:19 625:7,14	<b>broke</b>	694:14	495:14 496:14
573:15 575:1	625:18,18 626:10	592:5	<b>cancer</b>	497:24 498:8
612:13 684:10	628:14,23 629:5	<b>broken</b>	433:12,15,18,23	501:23 502:8,14
704:20 709:7	630:16,18 631:2,5	663:24 664:6	434:11,19 437:18	503:3 504:4 505:2
<b>Bondurant's</b>	684:24	<b>brother</b>	437:23 438:2,6	505:5 506:9,13,21
437:18,22 438:5	<b>BRCA-based</b>	442:19 444:20	439:12,15,20,20	507:2 509:7,11,14
439:21 442:15	631:9	445:15	439:24 440:4,6,12	510:8,14,20
448:12 453:4	<b>BRCA-positive</b>	<b>brought</b>	440:13,15,16,20	512:15,19 513:2,6
456:7 510:5	525:23 526:5 680:3	553:25 693:6 694:8	440:25 441:3,8,10	513:10,12,15,21
513:19 514:12	<b>BRCA1</b>	<b>BURCH</b>	441:11,24 442:3,5	514:2,13 515:16
515:4 532:23	524:11,12,21 525:3	430:12	442:11,17,25	516:3,23 517:2,5
533:12 534:5,13	525:8 527:22	<b>Buz'Zard</b>	443:2,5,16 444:20	517:8,10,18,20
535:7,15 536:2,18	530:19 631:6	706:10	444:22,23,24,24	518:2,6,11,13,16
537:7,8 548:7,14	<b>BRCA2</b>		445:6,14,15,16,18	518:21,22 519:2,3
560:8,16 561:8	446:24 524:15,21		445:18,21,25	519:4,7 520:16,19
565:25 566:4	525:15 527:23	<b>C</b>	446:4,5,6,6,10,17	521:11,21,23
567:2 568:15	530:22 631:6	430:1,17 431:1	446:18,22,23,25	522:1,6,12,16
570:10 573:9	<b>break</b>	432:5 436:2	447:1,9,14,16,16	523:1,8,15,17,19



523:23,24 524:5	602:8,18 603:11	677:22 678:4,11	700:22 701:16	568:12 574:6
524:13,17 525:10	603:13 604:1,5,12	678:13,15 679:4,5	702:2 704:14	575:12,14,19
525:17,19,24,25	604:15,23 605:1	679:9 680:5,19,23	707:10	577:4,17 579:20
526:3,6,8,16,19	605:23 606:1,5,21	680:23,25 681:12	<b>candidates</b>	584:18,22 585:8
526:19 527:17,25	607:4,8,23,24	681:13,15,19,25	606:20	587:24 588:1,16
527:25 528:8,11	608:3,5,8,12	682:5,11,11,15	<b>carbon</b>	588:19 589:5
528:15,19 529:2	610:16,19,25	683:15,25 684:13	638:14	591:21 592:19
529:17 530:21	611:1,11,20,24	685:17 686:16,23	<b>carcinogenesis</b>	594:4,8,13,18
531:6,11,15 532:4	612:6,16,23 613:3	687:8,10,15,20,21	540:23	595:4,20 604:9
532:7,10,25	613:6,22,23 614:3	690:22,22 693:10	<b>carcinogenic</b>	606:7 608:11
533:12,19 534:4,4	614:7,12,17,22,24	694:14,19,23	565:21,21 566:15	609:1,24 613:14
534:15,17,18	615:1,14,19,24	695:6 698:4,19,25	571:10	614:9 616:20,24
535:8,9,11,16,19	616:3,5,9,23	699:20 700:14,22	<b>carcinogenicity</b>	618:6 622:21
535:20,21 536:2	617:13,22 618:1	701:1,6,7,7,8,18	565:5,6,9,13,19	623:25 627:22
536:18 537:5,11	618:14 619:24	701:24 702:1,2	<b>carcinogens</b>	629:3,10,15 630:1
537:16 538:24	620:8 622:21	703:6 706:20,23	505:16 637:21	630:15,17 631:17
539:13,19 540:5	623:3,3,4 624:2,3	710:17,23 712:22	<b>carcinoma</b>	632:12 634:14
540:11 543:5,11	624:4,4 626:17,18	713:1,11,16,18	437:11,12 478:2	635:3 640:1,7,10
543:13,17 544:3,7	626:24,25 627:14	714:3 715:22	492:13 503:1	647:15 657:23
544:24 545:11,16	627:15,17,23,24	716:3,6,19,25	504:1 569:20,22	658:22 659:10
545:23,25 546:19	628:2,7 632:8,13	717:3,11,20,25	570:10 695:1	660:14 670:8
546:24 547:4,7,17	632:25 633:20	718:4,13,15,23	713:11 716:3	671:8,10 674:4
548:1,5,10,18,24	634:2 637:14,23	719:3,12 723:4,21	<b>care</b>	675:15 681:4
549:15 550:7,23	638:11,16 640:4,8	723:22 724:24	468:2 469:13	682:23 683:3,10
551:11 553:13	640:24 643:15,20	725:1,19,23 726:3	509:25 520:1	683:14 684:8
555:9,14,15	644:1 645:9 646:6	726:17,25 727:1,3	593:21 594:4	685:14 687:23
556:16,20,21	646:19 648:11	727:8,16	683:21 696:18	698:12 704:24
557:5,14,17,25	649:14 650:23	<b>cancerous</b>	697:6	707:1
558:1,5,10 560:9	651:5,11 652:21	529:7 571:25	<b>carefully</b>	<b>case-controlled</b>
560:16,24 561:10	652:25 653:9,20	<b>cancers</b>	729:4	483:22 541:25
561:21 562:4	654:17 655:2,13	446:14,16,20 447:4	<b>case</b>	<b>case-specific</b>
565:22 566:14,17	656:12,16,20	447:8 451:3,25	436:15 438:25	436:19 437:2 552:1
566:22,24 567:2,6	657:4,7,15,17	452:3 453:18,19	442:7 486:13,16	552:6 574:10
568:15 570:2,14	658:1,4,12,17,18	453:20 454:12,14	486:19,21 488:23	575:13,16,19
570:20 571:4,11	658:20,21 659:6	454:21 455:21	492:5 508:12,14	576:3 595:13
571:18 572:3,7,13	659:11,12,14	456:19,25 472:20	508:16 509:6	599:3 609:23
572:19,25 573:12	660:11,13,16	472:21,23 473:4	510:5,16 513:19	610:2,8,11 634:11
576:10,15,19,25	666:12 667:1,7,14	482:14,15,18	514:24 515:4,13	637:7 707:19
577:3,5,13 578:4	667:21,24 668:4	488:17,21 493:3	516:2 519:10	721:11
578:8,16,19,21,25	668:20,24 669:4	498:20 504:8	526:20 531:9	<b>cases</b>
579:1,4,8,9,11,14	669:12,16,23	506:14 507:7,20	532:23 534:5,6,13	479:16 482:14
579:15,24 582:15	670:11,13,20,22	517:9,16 534:9	535:15 536:18	483:5,23 484:14
583:6,11 584:10	671:5,11,15	570:15 572:4	537:8,8 546:13,15	484:16 485:7
584:18 586:13,15	673:19,20,21	604:8 624:8 674:2	548:4,7,14 550:20	486:5 488:11,22
588:4,5,10,20	674:9,13,16,25	674:21 676:21	553:12 559:23	489:11,13 490:17
594:24 597:13,18	675:6,11,17,19	684:5 687:18	560:8,16 561:8	490:19 491:12,21
597:24 600:2,8	676:5,24 677:5,10	693:12 695:12	565:25 566:4	494:25 495:10

499:24 500:4,4,11 500:18,24 508:4 514:25 517:1,3,10 517:13,18,21,22 518:1 522:15 529:15 537:3 551:9,12 553:15 561:8 562:1 566:23 575:2 584:14 586:4 588:2 604:22 605:8,12,14,16 628:21 632:10 639:10 640:6 644:19 647:7,7 670:9 671:4,9 675:10,18 676:3 677:4,17,20,21 678:15 679:4 681:3,15,22 682:13 685:4,5	441:18,23 442:5 442:11,12,14 453:20 454:12 455:4 506:5,9,21 507:1 509:13 510:8,19 512:11 512:12 513:13 514:1,12 518:1,5 518:11,16 519:6 521:22 522:1,11 522:20 523:3,8,19 525:25 526:16,19 527:25 528:11,15 528:19,21 529:8,8 529:9,16 531:11 531:14,18,22,24 532:1,3,10,10,22 533:18 535:7,8,10 536:1,22,23,24 537:16,19 538:23 539:11 544:6 547:8,19 548:6,7 548:10 550:6,23 551:17 552:16 555:15,18,22 556:12 558:5,9,10 558:10,13 559:9 559:12,22 560:1 561:9,20 565:22 566:13,17 568:14 572:17 576:10 584:17,17 588:5,9 594:24 600:10 604:5,11,11,14,19 604:23 605:2,20 605:22 608:11 610:15,25 622:13 627:3,24 628:1 632:8,13 634:2 638:16 640:4,8 651:11 663:9,12 663:16,22,25 664:2,7,11 665:24 666:5 670:11 671:5,15 674:21 675:11,16,19 676:4 677:5 678:3	678:11,13,23 679:9,11,15,21 680:18,23,25 681:9,13,18 682:14 684:16,19 684:20 685:8,23 686:15,15 694:22 699:19,19 706:23 707:9,14,19 <b>caused</b> 452:25 509:7,10 517:9,18,20,22 520:19 522:5 526:7 527:16 529:3 531:12 534:15,16,18 535:10 536:7,8,9 548:5,18,24 551:11 553:13 555:2 557:3 560:17,24 561:9 567:3,6 579:24 588:19 613:6 671:14 679:5 680:5 684:11,22 685:7,9,15,22 686:3,10,22,24 701:6,23 713:21 716:25 <b>causes</b> 437:22 438:4,18 439:5 456:22 486:7 507:19 512:13 516:23 517:5 522:18 523:1,14 528:18 530:15 532:7,24 533:11 535:13 547:25 555:9,24 560:8 561:14,20 588:3 619:23 664:6,15 674:8 675:6,19 677:21 690:21 696:24 701:16 <b>causing</b> 456:21 469:9	511:15,21 537:4 546:23 555:13 557:16,18,21 572:24 584:9 651:5 665:15 706:19 <b>cavity</b> 554:8 <b>CDT</b> 429:19 436:3 508:20 575:7 582:25 592:3 609:20 621:25 645:23 682:21 727:25 <b>cell</b> 444:20 453:18 454:14 455:19,20 456:18 516:9 527:4,8 528:18,21 529:6,7,9 531:18 532:1,8,9,13 555:20 566:21 571:24 583:9 586:14 681:11 701:23 <b>cell-type</b> 583:10 <b>cells</b> 497:5,6,6,7 532:3 555:17 559:23,24 559:25,25 560:5 578:19 601:3,18 602:3 639:3 706:8 <b>cellular</b> 555:8,17 559:16 706:6 <b>Center</b> 445:6 615:11 659:5 <b>certainly</b> 506:20 550:8 696:15,18 711:2 <b>certainty</b> 708:2 <b>CERTIFICATE</b> 432:14 728:1 <b>certified</b>	429:20,21 696:16 728:3,3,20,20 <b>certify</b> 728:4,7,10,13 731:4 <b>cervical</b> 445:14 <b>cervix</b> 446:11,12 595:25 701:7 <b>cesarean</b> 698:6,13,15,18 <b>challenge</b> 513:9,14 551:7 <b>challenging</b> 582:6 <b>chance</b> 452:18 472:15 530:20 536:7,9 607:3 667:10 <b>chances</b> 474:9 611:23 612:22 <b>change</b> 450:18 453:1 515:13 528:23 555:16 640:15 689:13,22 699:18 707:14,19 730:2 <b>changed</b> 554:20 689:19 690:10 <b>changes</b> 502:12 512:24 532:9,22 555:17 697:18,21,24 729:11 731:6 <b>characteristics</b> 649:1 <b>characterizing</b> 725:19 <b>charge</b> 468:6 <b>chart</b> 468:6 <b>check</b> 642:1 720:18
--	---	--	---	--

<b>Chemical</b> 665:9	<b>clarification</b> 685:21 706:11	513:21 533:12	<b>combinations</b> 598:8	<b>comparatively</b> 530:8
<b>chemotherapy</b> 602:11,15 606:16	<b>clarified</b> 495:7	566:14 567:2	<b>combined</b> 488:13	<b>compared</b> 534:15,17 655:3
661:11	<b>clarify</b> 544:12 604:15	695:1 710:16	<b>come</b> 468:13 516:18	<b>comparing</b> 481:6
<b>child</b> 456:4	615:18	712:22 713:2,11	532:13,14,15	<b>competent</b> 676:3
<b>children</b> 458:8 460:4 573:23	<b>Clarke-Pearson</b> 527:7	713:19,20 714:3	552:1 565:3 575:3	<b>competing</b> 511:24 513:4
620:20	<b>Clarke-Pearson's</b> 506:24 507:16	715:22 716:3,19	607:4 692:14	<b>complete</b> 507:25
<b>chlamydia</b> 544:1	<b>clause</b> 725:24 727:2	718:7,12,23 719:2	<b>comes</b> 447:7 458:4 511:4	<b>completed</b> 602:11,13,15
<b>chlamydial</b> 544:4	<b>clear</b> 487:7 495:23 499:3	<b>clear-cells</b> 479:7 489:9 491:6	572:4 574:12	<b>completely</b> 556:11
<b>chromium</b> 588:25	501:5,8 533:22	712:15	598:25 638:6	<b>complicated</b> 513:12
<b>chronic</b> 544:2 555:7,10,12	540:4,20 543:7	<b>client</b> 582:10	<b>comfortable</b> 697:2	<b>complications</b> 554:13,25
555:21,23 556:4,7	614:3 616:1,4	<b>clients</b> 591:8	<b>coming</b> 533:9	<b>component</b> 512:4
557:15 558:6	621:9 658:7	<b>clinical</b> 457:4 461:24 469:8	<b>commencement</b> 728:4	<b>composed</b> 638:14
559:11,18,19	663:17 670:21	477:8 536:5 697:8	<b>commencing</b> 429:19	<b>composition</b> 597:10,20,23 600:1
600:16 601:19	674:15 693:8	<b>clinically</b> 664:17	<b>commentary</b> 449:15	<b>compound</b> 568:13
602:4 638:21	<b>clear-cell</b> 437:10,12,18,23	<b>clinician</b> 513:25	<b>comments</b> 480:16 530:2	<b>computer</b> 481:19
639:3,10,14,16,21	438:5 469:17	<b>close</b> 479:7	<b>Commerce</b> 430:3	<b>concept</b> 504:13 516:20
639:23 663:13,22	471:7,11,18	<b>coauthor</b> 497:14 537:25	<b>commission</b> 728:22 731:17	<b>concern</b> 528:19 727:13
664:2,8 697:12	472:19,20,22	<b>cobalt</b> 589:1	<b>common</b> 478:6 503:6,13	<b>concerned</b> 607:23
698:21	473:2,4,17 474:10	<b>coffee</b> 544:23,25 545:11	504:6,7,17 505:12	<b>concerning</b> 542:9
<b>cigarette</b> 544:25 545:17,19	474:13,20 475:1	545:15,21,24	513:1 543:8 544:5	<b>concert</b> 568:25
<b>CIRCUIT</b> 429:8	475:20,25 476:6	<b>cohort</b> 666:22	544:25 556:22	<b>conclude</b> 540:25 541:18
<b>circumstances</b> 700:9	476:24 477:17,21	<b>collectively</b> 651:18	569:25 570:4	550:22 632:12
<b>cirrhosis</b> 513:6	478:2,6,8,18,23	<b>College</b> 430:13	597:17 600:7	694:18
<b>cite</b> 581:2	479:2,10,19 480:2	<b>colon</b> 444:24 513:12	606:7,8,11,13,17	<b>concluded</b> 501:12 713:9
<b>citing</b> 580:19	480:4 482:14,18	603:16,17 701:7	643:23 644:10	<b>concludes</b>
<b>CITY</b> 429:8	483:6,8 484:13,16	702:1	651:23 667:21	
<b>claim</b> 553:12	484:20 485:7,9,21	<b>column</b> 498:15 703:22,22	673:10 697:11,18	
<b>claimed</b> 585:14	486:8 487:12,20	703:23	698:22	
<b>claims</b> 584:3 631:22	488:7,11,18,21	<b>combination</b> 561:2 669:8 680:4	<b>commonly</b> 476:6 504:19 558:3	
	489:2,13,21		606:4 702:2	
	490:16,17,19,25		<b>communicated</b> 589:11 590:25	
	491:12,17,21,24		593:3	
	492:12,17,24			
	493:3,9,17 494:11			
	494:20 495:12,14			
	496:19,25 499:2			
	501:7,16 502:17			
	503:3 504:3,9			
	505:14 510:8			

711:15 712:8,20 712:24 <b>conclusion</b> 490:12 538:22 539:2,3,8,22 649:2 650:19 710:16,22 712:10 725:3 728:12 <b>conclusions</b> 538:14,15 646:2 694:15,21 695:22 696:3 717:17 <b>condition</b> 697:17 <b>conducted</b> 511:6 644:1 711:21 711:24 725:15 <b>confers</b> 498:11 <b>confidence</b> 472:8,10 544:16 583:14 725:17 <b>confirm</b> 462:12,25 463:13 465:8 466:9 469:12 630:11 <b>confirmation</b> 462:1,2 463:24 465:21 466:16,24 467:3,11,19 469:1 533:23 630:24 631:3 704:21 705:8 <b>confirmed</b> 438:12,13 464:21 468:22,23 630:8 630:10,23 <b>confluent</b> 662:12 <b>confounder</b> 541:23 542:25 544:19 545:14,20 546:17 547:2 <b>confounders</b> 542:20,21 547:18 <b>confounding</b> 540:24 541:13	547:15 <b>confused</b> 495:20 657:10 680:12 <b>confusing</b> 613:25 <b>connection</b> 476:8 643:14 <b>consider</b> 463:17 467:4,9 468:21,24 510:1 511:24 523:7 525:24 528:10 542:1 544:24 553:23 554:1 563:19 572:23 578:9 607:10 627:5 657:21 658:13,15 660:14 666:11 669:2,21 680:24 708:19 <b>considerable</b> 712:4 714:22 <b>considered</b> 489:10 542:18 563:1,10 578:3 605:18 641:9 698:16 721:6,9 722:1 <b>consistency</b> 711:23 725:13 <b>consistent</b> 456:12 457:13,17 476:23 477:16 542:8 615:23 632:5 694:5,10 702:16 723:2 724:3 726:22 <b>consistently</b> 498:18 <b>consortium</b> 479:20,21,23 483:14 <b>constituents</b> 598:4 635:24 <b>construction</b> 587:8,9	<b>consult</b> 591:23 <b>contain</b> 445:3 588:24 <b>contained</b> 561:19 588:15 707:23 718:23 719:3 720:25 721:7,22 <b>contains</b> 437:1 588:23 664:11 <b>contamination</b> 567:13 <b>content</b> 590:1,14 <b>context</b> 593:22 <b>continue</b> 449:24 498:25 520:6,9 572:16 575:10 621:22 <b>continued</b> 528:20 572:16 <b>continuing</b> 528:24 <b>contradict</b> 616:8,22 617:12 <b>contradictory</b> 617:3 <b>contraindication</b> 546:11 <b>contribute</b> 535:18,19,21,22 <b>contributing</b> 437:17,22 438:4,15 438:18 439:2,5 441:18,22 442:12 442:13 510:7 522:18,20 523:1,3 523:14 557:17 572:12,25 584:17 604:11 699:19 700:12 706:19 <b>conversation</b> 590:2,19 592:6 <b>conversations</b>	594:11 <b>copy</b> 480:21 481:3 689:10 <b>cornstarch</b> 569:12,15 662:16 662:20,25 663:9 663:12,16,18,22 663:24 664:5,10 664:15 665:14 666:3 <b>Corporate</b> 430:8 <b>correct</b> 437:8 438:16 439:2 441:11 442:7,17 443:10 446:15 447:19 448:15,23 450:16 451:8,19 452:4 453:6 454:7 455:2,18 456:13 464:6 468:14 472:9 473:9 474:21 475:1,20 475:21 476:1,15 477:14 478:19 479:13 485:10 486:8 487:13,22 488:8,21 489:5,18 489:19 491:2 492:9,18 493:17 495:15 497:1 498:4,9 499:12,20 500:21 501:12 502:9 503:4,18 504:4,15,25 505:20 507:22 511:11 515:2 516:3 518:6,11,23 520:21 521:23 522:6 523:15 524:6,13 525:10 526:22 528:11,16 530:17 531:7 532:16 534:7 537:5 548:1,15 550:7 551:17,18	554:1 556:8,11 557:6,18 559:13 560:9,19 561:10 561:21 562:10,13 563:15,24 568:8 572:25 573:9 575:15 576:12 577:23 579:4 580:11 581:14,25 582:16 584:19 585:10 586:7 588:5,20 594:6,18 597:16 599:22 600:11 602:1 604:12,24 605:14 608:3 610:7,16 611:11,20 612:7 612:17 613:17 614:12 618:6,8,14 620:2 623:4 624:4 624:5,14 626:11 627:24 628:9 630:4 631:11 632:14,18 633:16 633:21 636:10,23 637:10 638:2 639:12 640:3 642:20 643:6,11 644:7,15 648:1 650:4 651:5,19,24 653:1 654:18 655:13,16 663:14 664:12 667:1 670:13 671:6,20 672:8,15 673:10 673:24 674:22 677:14 678:7 679:13 680:5,19 681:4,19 682:5 683:23 684:13 685:17 686:4,11 686:25 688:1 690:23 704:5,8,19 709:9,13,19 710:5 711:10 713:12 714:3,13 715:22 717:11 718:2,16
---	---	--	---	---

731:5 <b>corrected</b> 497:10 <b>corrections</b> 729:4,7 731:6 <b>correctly</b> 485:23,25 513:20 535:5 554:15 620:16 <b>correlation</b> 549:14 668:19 <b>correspond</b> 646:13 <b>counsel</b> 430:5,10,15,20 431:6 458:10 459:9,13,22 460:6 461:16,18 507:12 574:23 655:21 728:14,15 <b>counts</b> 472:22 <b>couple</b> 484:8 490:11 521:10 661:8 691:2 693:6 707:14 708:25 719:20 720:20 <b>course</b> 470:10 566:1 606:23 <b>court</b> 429:1,8,20 728:3 728:20 729:20 <b>cousin</b> 443:15 <b>covered</b> 604:21 688:8 <b>Cramer</b> 433:13 480:5,10,14 482:19 483:6 484:4,7,12,16,18 485:6,17 486:3,25 487:11,19 492:22 492:23 517:3 582:11 583:4 693:19	<b>Cramer's</b> 487:15 517:15 <b>create</b> 672:23 <b>credible</b> 702:13,18,25 <b>criteria</b> 509:9 <b>critical</b> 512:4 726:17 <b>crossed</b> 583:15 <b>crosses</b> 544:17 <b>CRR</b> 728:18 <b>culture</b> 706:8 <b>cured</b> 607:11,16 <b>Curriculum</b> 434:21 688:25 <b>CV</b> 688:11,19,21,22 689:11,15,24 690:9,18 <b>CYNTHIA</b> 430:7 <b>cytokines</b> 560:5 601:7,21 639:6 <hr/> <b>D</b> <hr/> <b>D</b> 436:2 <b>dad's</b> 656:19 <b>daily</b> 551:3 576:21 584:6 585:4,9 632:2 633:4,7 <b>data</b> 479:19 480:2,4 483:7,8 486:25 487:4,11 493:9 572:4 712:5 714:23 723:5,17	725:21 726:14,16 726:21 <b>database</b> 725:18 <b>dataset</b> 484:13 486:4 487:5 <b>date</b> 429:19 511:1 657:1 689:16,19 690:16 728:8 729:9 731:12 <b>Dated</b> 728:23 <b>daughter</b> 446:11 514:21 620:2,2,10,17 621:1 629:4,7 631:25 633:4,12 656:11 683:11 <b>daughter's</b> 510:12 566:4 617:23 624:18 625:1 <b>Davis</b> 434:11 640:17,24 643:9 646:2 648:7 705:10,13,15 <b>day</b> 511:2 585:21 586:2 586:3 632:3 633:5 633:8 724:19 731:16 <b>day-to-day</b> 509:25 696:13 <b>days</b> 704:5 707:14,18 729:16 <b>death</b> 619:23 622:14 624:8,11 <b>decades</b> 555:6 725:15 <b>deceased</b> 444:21 619:21,21 622:12 656:16 657:4 <b>December</b>	602:8 <b>deemed</b> 729:19 <b>deep</b> 589:17 <b>Defendants</b> 429:13 430:20 431:6 <b>defense</b> 708:14 <b>defer</b> 563:24 564:1,6,17 <b>deferring</b> 564:13 <b>defined</b> 564:2 <b>definitely</b> 517:19 577:21 647:2 <b>definition</b> 433:9 452:14 511:1 <b>definitively</b> 685:6,14 <b>degree</b> 708:1 725:13 <b>demonstrate</b> 498:18 <b>demonstrated</b> 501:6 580:24 <b>denies</b> 444:23 <b>depending</b> 530:16 531:11 532:2 559:14 <b>depends</b> 555:12 581:8 <b>DEPONENT</b> 432:16 731:1 <b>deposed</b> 553:20 586:8 <b>deposing</b> 729:15 <b>deposition</b> 429:18 433:1,21 434:1,7,14 436:23 444:7 445:8 452:10,13 470:3	474:18 480:12 482:6 490:3 493:25 494:1,8 495:6,19 496:5,7 497:21,22 506:24 506:25 507:16 510:12,24,25 514:20 516:6 566:5 575:20 576:1,6 584:7 585:12,19 586:10 586:11 587:6,15 595:5,6 610:5,12 611:6 615:2,5 616:25 617:23 618:13,17,18,20 618:24,25 621:8 622:2 624:19 625:1,4 626:9 629:11 632:1 634:19 639:19 640:20,22 655:20 655:22,23,25 656:4 659:2 661:18,20 662:2 667:5 688:23,24 689:25 702:8 721:2 728:12 729:3,13,17,18 <b>depositions</b> 588:8 702:24 <b>deposits</b> 597:24 600:8 <b>deps@golkow.com</b> 429:25 <b>dermal</b> 497:5,6 <b>describe</b> 554:6 617:25 <b>described</b> 571:16,17 599:21 617:2 698:11 <b>describes</b> 454:11 596:24 598:17 614:6,11 <b>describing</b> 571:20 592:6
---	---	---	--	---



<b>description</b> 637:2	557:14 572:20 602:7 606:4,22	503:11,14 504:2 504:10,14,15,19	714:18	<b>disprove</b> 580:2
<b>designed</b> 669:17	608:20 613:3 629:13 704:17	504:24 505:5,12 505:18 511:20	<b>discomfort</b> 557:3,21	<b>disputing</b> 474:14,15,17,22
<b>details</b> 566:6,19,25 614:7 614:16 661:15 684:18	709:22 710:11 <b>diagnoses</b> 511:25 513:4	518:22 520:16 531:20 535:25	<b>discount</b> 572:10	<b>distension</b> 512:19
<b>determination</b> 493:21 549:6 570:9	<b>diagnosing</b> 704:3	536:17 537:20 539:25 558:4	<b>discounted</b> 463:16	<b>DISTRICT</b> 429:1,1
<b>determine</b> 509:9 510:19 518:15 583:23 584:1 618:4 631:21 676:4 679:5 682:1	<b>diagnosis</b> 465:20 466:10,16 467:25,25 468:22 468:25 469:6 509:21 511:7,14 511:19,24 512:5,6 512:9,10 513:19 514:1,8 558:4 572:11 573:12 577:8 603:14 606:2 629:22 630:3,8,22,23 668:24 670:12 683:16 697:5 704:14 709:11,16 710:4	569:9 570:1,5,6 571:8,12 583:8 629:6 630:21 651:12,13,15 652:16 686:19 725:15	<b>discourage</b> 666:15	<b>doctor</b> 445:2 447:22 457:6 458:25 481:12 487:9 490:8 496:11 519:24 520:12 525:1 590:5 614:5 657:8 665:2 691:20 700:1 715:6
<b>determined</b> 551:10 675:12,16 675:20 677:6	<b>diaphragm</b> 554:21	<b>differential</b> 468:25 469:6 509:21 511:6,14 511:19,23 512:5 513:4,25 514:6,8	<b>discover</b> 547:8	<b>doctor's</b> 524:23 611:5
<b>determining</b> 510:6 514:11 657:21 719:9	<b>die</b> 607:25	<b>differentiates</b> 598:13	<b>discrepancy</b> 480:2	<b>doctors</b> 504:23
<b>develop</b> 552:1 570:11 685:17	<b>died</b> 620:11 621:15 622:15 623:1,7,12 623:15	<b>differently</b> 491:15	<b>discuss</b> 498:6 541:21 674:18	<b>document</b> 444:17 473:21 482:21 620:12 638:25 645:19 692:9 718:1
<b>developed</b> 611:10,20 612:5,16 623:3 624:3,8	<b>difference</b> 438:22 487:16 488:13 491:20 499:16 500:20 505:2 506:16 647:14,15 649:21 650:7 652:10	<b>difficult</b> 499:6 501:10 540:25 541:18 618:10 687:10 688:2 697:1	<b>discussed</b> 437:7 476:18 547:25 560:6 575:25 588:2 590:18 594:3 610:5 662:25 671:9 674:20 679:12 702:21 705:22 727:6	<b>documentation</b> 628:14
<b>developing</b> 454:14 455:1 524:13 525:10,19 611:24 653:19	<b>diaphragm</b> 554:21	<b>dig</b> 470:9	<b>discussing</b> 692:17 694:2	<b>doing</b> 520:7 546:7 549:21 586:1 599:2 603:21 729:8
<b>development</b> 572:12 579:3,15 600:2 613:23 632:25 637:14 638:10	<b>died</b> 620:11 621:15 622:15 623:1,7,12 623:15	<b>direct</b> 617:12 706:18	<b>discussion</b> 485:14,16,25 550:13 586:21 590:14,17 645:13 664:24 676:16 726:19	<b>dose</b> 705:14
<b>develops</b> 521:21 622:21	<b>difference</b> 438:22 487:16 488:13 491:20 499:16 500:20 505:2 506:16 647:14,15 649:21 650:7 652:10	<b>directly</b> 457:21 552:9 585:17	<b>disease</b> 441:25 450:16 512:14 516:21 540:7 556:1,4,5 602:22 603:25 606:20	<b>dose-response</b> 641:7 642:20,25 645:7 646:4 648:9 649:3,12 650:11 705:16
<b>diagnose</b> 464:18,24 465:1,2 699:7 708:17	<b>differences</b> 499:5,20 501:9	<b>disagree</b> 507:11 539:23 541:4,17 590:9 591:12 648:6,13 648:24 649:1,6,7 649:20 650:2 651:7 685:20	<b>diseases</b> 511:15 555:24	<b>double</b> 469:16,24
<b>diagnosed</b> 440:20 464:4,15 465:12,19 466:22 473:8 513:20 556:17,20 557:5	<b>different</b> 483:18 496:13 498:7 499:17 501:21 502:9,13 502:23 503:1,7,7	<b>disagreement</b> 665:20	<b>disorder</b> 455:15	<b>douche</b> 669:11 670:6
		<b>discard</b>		<b>douching</b> 434:18 666:11,15 666:25 667:6,13 667:21,22 668:4

668:10,20 669:2,9 669:15,18,21 670:4 <b>Dr</b> 432:10,12 436:12 441:12 442:8 443:12,17 444:4 447:6 448:3,8,10 449:8,13,17,25 450:5,10,17,24 451:10,21 453:7 453:25 454:8 456:14 457:10,15 457:25 458:12,15 458:22 459:16 460:8,25 462:15 463:2 464:5,9,17 465:17,24,24 466:1,8 467:7,14 467:16,20,21,23 468:8 469:3,18 470:10 471:20 475:2,6,8 476:9 476:14,22 478:20 479:14 480:6 481:18 483:10 484:16,23 485:11 486:9,12,17 487:14 488:9 489:6 491:19 493:1,10,18 494:24 495:16 499:13,22 500:9 500:14,22 501:13 501:24 502:10 503:5,19 504:5,16 505:21 506:2,10 506:24 507:3,16 507:24 508:6,22 508:25 509:12 510:21 511:17 512:1,7 513:8 514:3,16 515:1,3 515:6,12,19 517:3 517:7,15 518:17 518:24 519:12,16 520:1,8,22 521:24	522:7 523:4,16 524:8,19 525:2 526:9,13,21 527:7 527:18 528:3 529:4 530:7 532:6 533:2 534:19 536:3 537:17 542:4,23 543:15 546:1,5 547:11 548:9 549:10 552:7 553:18 556:18 557:19 560:20 561:5,11 561:22 562:14,20 562:24 563:17,25 564:7,12,20 565:17 567:4,16 567:20 568:16,23 569:7,23 571:7 572:14 573:1 575:9 576:16 577:1 578:5 579:5 579:16 580:12 581:7,19 582:3 583:2 584:20 587:4 588:6,21 589:25 590:9,12 590:20 591:6,22 592:5,20 593:7,24 594:17,22 595:4 595:12,19 596:4,8 596:15 597:7,11 597:21 598:2,15 598:16 599:7,19 600:3,13,15 601:11 603:12 604:3,13 605:5,15 607:1,18 608:4,14 608:22 609:5,11 609:17,22 610:21 614:4,5,11,15,19 614:20 615:20 616:10 617:1,6,12 617:14,24 621:23 623:5 626:21 629:2,16 630:5,20 631:24 632:19	634:4,10,13,16,24 635:3,17 636:8 637:17 638:12,18 638:20 639:25 640:9,14 641:10 641:14,19,25 642:3,5,18,23 643:3 645:14 646:10 648:2 649:4,17 650:5 651:6 652:9 653:2 653:10,16 654:8 654:19,21 655:14 656:6 657:24 659:15 663:2,15 664:4,13 665:22 666:13 668:6 669:5,25 670:14 671:1,7,23 673:1 673:25 674:11,23 675:13,23 676:8 676:12,18 677:7 677:23 678:8,17 679:6,14,19 680:8 680:20 681:20 682:6,23 684:14 685:18 686:5,12 687:1,7 688:10,15 691:8,9 692:1,10 693:1,16,19,22,24 694:11,24 695:4,9 695:14 699:11,25 700:7,20 701:10 702:19 703:1,13 703:18,23 704:1 704:11 705:4 706:3,6,16 708:23 709:14 710:6,8,21 712:9,23 713:13 715:2,8,23 716:22 717:12 718:17,25 719:13 721:14 722:7,14,22 723:9 723:12,16,25 724:10 725:4 726:4,8,11 727:9 727:18,21	<b>DRINKER</b> 431:2 <b>drinkers</b> 545:1,21,22 <b>drinking</b> 545:24 <b>Drive</b> 430:8 <b>driving</b> 541:24 546:4 <b>dropped</b> 572:5 <b>due</b> 499:4,20 501:8 554:13,24 617:5 <b>duly</b> 436:6 728:5 <b>duration</b> 552:15,21,24 584:9 584:11 632:4,7 633:24 645:8 646:5 647:4 648:10 649:13,22 650:4,8,12,12,17 705:16,21 <b>dusting</b> 554:12,24 <b>dyspareunia</b> 697:14 <hr/> <b>E</b> <hr/> <b>E</b> 429:20 430:1,1 431:1,1 432:5,5 436:2,2 728:2,18 <b>earlier</b> 497:4 537:1 557:5 569:25 571:2 575:25 594:21 599:21 604:7 610:5 628:20 629:11 643:5 656:18 659:1 662:22 <b>early</b> 454:15 512:23 607:6 608:19	658:25 <b>EASTERN</b> 429:1 <b>editor</b> 692:20 719:21 <b>editorializing</b> 723:11 <b>Edna</b> 656:15,25 657:3 <b>effect</b> 704:8 723:18 726:18 <b>effects</b> 562:16 665:15 <b>eight</b> 478:12 479:6 488:13 595:19 597:4 623:15,17 623:19 <b>either</b> 456:17 497:2,7,9 500:6 515:1 532:1 536:14 562:22 599:20 627:23 647:15 663:13 669:18 671:5 672:6 679:18 <b>Elbendary</b> 614:20 <b>electronically</b> 481:25 689:7 <b>elements</b> 598:9,21 599:14 <b>eliminated</b> 517:17 <b>ELLIS</b> 430:17 <b>employee</b> 728:13,15 <b>endogenous</b> 600:5 638:1,4,9,13 <b>endometrial</b> 444:24 472:20 698:3 <b>endometrioid</b> 476:7 478:9 479:2 488:18 490:25
--	--	---	--	---

498:21 502:17 505:13 582:15 583:6 695:6 712:15 713:3,19 713:21 714:2 717:11 718:8,12 718:22 719:2,12 <b>endometrioid-type</b> 583:10 <b>endometriosis</b> 438:8,12,15 461:23 462:4,6,9,18,22 463:11,20 464:5 464:10,16,19,24 465:2,8,13,21,25 466:7,10,15,20 467:6,10,15 468:21 469:2,11 469:15,16,23 470:15,23,24 471:4,6,11,14,15 471:17,25 472:5 472:13 473:1,8,13 473:15,19,23 474:5,9,19,25 475:15,16,17,23 476:2,6,24 477:17 521:14,17 532:21 533:21,24 534:18 535:10,22 536:20 536:23 537:12 558:8 628:22 629:13,22 630:4,9 630:12,22,25 675:4 696:6,9,14 696:15,19,22,24 697:7,10,17 698:8 698:12,17,22 699:3,5,7,8,12,14 699:17 700:2,3 703:5 704:3,15,17 704:21 705:7,9 707:5 708:17,20 709:12,16,22 710:5,12 <b>England</b> 479:20,22	<b>entire</b> 551:6 658:15 682:7 <b>entirely</b> 506:4 616:4 <b>entrapped</b> 580:25 581:21 <b>environmental</b> 505:16 516:13 <b>epidemiologic</b> 488:5 542:6 544:10 550:9 584:11 585:5 632:6,24 <b>epidemiological</b> 724:1 725:14 726:22 <b>epidemiologically</b> 655:15 701:15 <b>epidemiologist</b> 476:15 <b>epidemiology</b> 486:6 492:16 493:8 498:7 541:22 711:15,22 714:7 714:20 723:5 <b>epithelial</b> 472:23 485:19 501:22 502:8,13 507:19 566:24 570:2 605:25 682:12 684:5 695:11 713:1,16 713:18 716:5,24 718:4,15 724:23 725:1 726:2 727:3 727:8,16 <b>equally</b> 553:2 <b>ERIC</b> 431:2 <b>eric.friedman@f...</b> 431:3 <b>errata</b> 432:15 729:6,9,11 729:15 730:1 731:7 <b>error</b> 486:2 495:5	<b>especially</b> 471:11 475:24 <b>ESQUIRE</b> 430:2,7,12,17 431:2 <b>essentially</b> 682:19 <b>establish</b> 650:10 <b>established</b> 562:9 <b>estimate</b> 551:20 <b>et</b> 429:12 433:13,16 433:19,23 434:12 434:20 480:15 482:8 490:5 497:24 640:24 667:7 <b>etiologic</b> 499:4,20 500:20 501:9 <b>etiology</b> 569:20,21 <b>evaluate</b> 595:2 <b>evaluated</b> 542:13 <b>evaluating</b> 510:15 623:25,25 <b>evidence</b> 459:11 486:18,20 500:7 509:22,22 509:22 523:6 541:6 551:10 562:3 567:11,22 570:22 586:20 589:4 600:15 601:9,24 602:16 602:22 603:10 627:25 629:21,25 630:15,17 638:20 671:24 699:8,12 699:16,23 700:3 700:15 701:14,21 705:9 706:25	707:1,4 709:11 724:6 <b>evidence-based</b> 510:23 <b>exact</b> 550:16 632:17 667:2 <b>exactly</b> 463:23 <b>examination</b> 432:8 436:9 662:5 691:6 709:3 722:12 728:4 <b>examined</b> 599:20 712:5,13 714:23 <b>example</b> 502:24 503:3 504:3 524:3 544:21 545:19 572:10 577:19 665:15 <b>examples</b> 551:12,13 <b>exceptions</b> 516:24 <b>excerpt</b> 433:20 434:6,13 496:6 618:19 621:9 655:24 656:3 662:3 <b>excerpts</b> 445:6 618:25 <b>exclude</b> 695:1,6,11 710:24 713:2 <b>excluded</b> 483:18 665:13 712:14 <b>excuse</b> 488:16 <b>exhibit</b> 436:23 437:6,16 444:6,7 445:5,8 452:10,13,19 463:10 470:3 474:18 480:11,12 482:5,6 490:2,3	496:2,5 497:21,22 575:20 576:7 582:20 595:5,6 610:12 615:3,5 616:25 618:17,18 618:24 619:3 634:18,19 640:21 640:22 655:22,23 659:2 661:19,20 662:3 667:4,5 688:23,24 689:25 691:13 703:14 721:1,8 <b>EXHIBITS</b> 433:1 434:1 435:1 <b>exist</b> 709:19 <b>exogenous</b> 598:4,7,13,14,19 598:24 <b>expect</b> 456:16 493:4 568:10 576:4 600:22 651:4 652:23 653:7,8 654:14,23,24 <b>experience</b> 690:3 <b>experimental</b> 540:22 541:8 <b>expert</b> 434:2,8 537:14 562:12,15 594:8 594:12 595:7 634:20 695:23 696:9 708:14,20 <b>expertise</b> 697:8 <b>expires</b> 728:22 731:17 <b>explain</b> 559:18 653:6 654:5 <b>explaining</b> 565:18 <b>explanation</b> 503:17 605:4 <b>explored</b>
--	--	--	--	---

480:1	463:21 516:13,14	684:25 685:13,23	578:20 579:2,13	<b>fellow</b>
<b>exposed</b>	518:21 519:2,4,5	690:22	613:22,24 614:6,8	429:20 593:25
518:10 549:7 566:1	522:16 528:17	<b>facts</b>	614:11 615:13,19	728:2,19
566:11 584:2	531:23 537:4	593:2 658:22	617:18,19,25	<b>fellows</b>
631:21	540:20 541:7	<b>FAEGRE</b>	618:5,10 620:19	683:7
<b>exposure</b>	543:3,21 546:9	431:2	621:5,6 622:20,23	<b>felt</b>
492:17 548:14	576:20 577:13,15	<b>fail</b>	624:1 626:17,24	600:4 603:15
551:21,23 566:13	577:17,21 578:3,9	729:18	627:3,6,9,13,15	<b>female</b>
571:9,24 579:20	578:10 579:3	<b>fair</b>	627:22 628:1,2,10	665:16 696:21
580:4,8,10,14	611:4 613:9 618:5	439:6 441:23	655:19 656:14	<b>females</b>
584:15,19 587:2,2	622:19 624:1	463:21 487:9	657:3,22 658:14	580:25
587:11 631:17	627:9,23 632:25	523:3 527:2	658:15 659:12,18	<b>fibers</b>
632:11 633:19,25	657:22 658:13	531:16 536:24	660:14,19 661:5	515:7,12,24 562:3
675:3 682:1	659:13,14 660:15	544:15 545:17,18	671:20,25 673:5	562:3,7,20,25
700:10 706:8	661:6 666:12	553:5 565:14	679:25	563:18,18 567:24
722:25 723:4,20	669:3,22 670:11	607:17	<b>family's</b>	588:25 599:21
725:20 726:19,24	670:19,20,21	<b>fairly</b>	461:8	640:14
727:12	671:25 674:15,15	647:16	<b>FAPR</b>	<b>fibrocystic</b>
<b>express</b>	676:23 678:12	<b>Fairmont</b>	728:18	697:16,21,24
717:8,21	679:15,20,21	429:18	<b>far</b>	<b>fibroids</b>
<b>expressly</b>	680:17,17,22,24	<b>falling</b>	448:1 487:10 538:8	513:5
713:8 716:17	681:8,16,17 682:4	581:24	549:16 563:9	<b>fibrous</b>
718:11 719:9	684:24 685:4,7,15	<b>fallopian</b>	568:6,9 603:24	560:23
<b>externally</b>	688:1 698:7,17,19	552:18 595:24	606:10 607:3	<b>figure</b>
553:3	698:25 700:12	596:1 635:5,8,14	649:7,19 655:18	487:7 492:1 599:5
<b>extirpation</b>	706:19	636:22	664:5 669:17	614:24 637:9
696:20	<b>factors</b>	<b>falls</b>	<b>fast</b>	<b>figuring</b>
<b>extremities</b>	439:5 442:3 461:13	516:11,15 581:21	531:1 570:18	468:1
512:21 513:1	462:17 509:16,16	<b>familiar</b>	<b>father</b>	<b>filed</b>
	510:14,15 511:20	452:6 497:12 498:2	619:8,9 620:19	436:16
<b>F</b>	512:11,16 514:14	504:12 580:20	621:4 622:10	<b>financially</b>
<b>F1</b>	514:20 520:16,18	640:16 641:2	<b>father's</b>	728:15
636:4	520:19 521:11,21	642:15 666:21	620:14,20,22 621:4	<b>find</b>
<b>facial</b>	522:17 523:13	<b>family</b>	659:20	439:16 465:4
455:7	529:12,18 531:14	437:25 438:2	<b>fatigue</b>	487:12 488:14
<b>fact</b>	533:16,16 534:6	439:10,17 440:24	512:24	490:20 491:5,7
438:14 443:11	535:25 536:17	441:2,9,14,17	<b>fax</b>	492:23 493:4,20
469:15 471:16	537:9,15,20	442:16,17 444:14	429:24	512:8,9 513:15
515:22 606:12,15	542:12,21 543:1,4	446:15 447:3,10	<b>FDA</b>	566:8 576:20
651:8,13 652:17	543:11,13,17,23	454:17,21 456:17	666:3	597:13 600:15
673:10 699:17	545:4 557:13	457:22 459:24	<b>features</b>	617:9 638:20
720:15	560:4 601:8,21	460:10 461:12	455:8	649:3 652:5,10
<b>factor</b>	612:1 639:6	522:24 523:10	<b>feel</b>	655:9 673:21
438:17,22 439:9,25	670:18 671:12	532:16,19 533:17	519:24 615:23	674:14 690:12
440:6,25 441:20	676:24 678:3	534:16 535:9,20	700:14	697:5 702:12,25
441:21 447:24	679:9,11 680:2	536:19,22 537:11	<b>feet</b>	715:20 716:20
462:4,6,9,22	681:7,17 684:19	543:20,23 574:2	455:9	718:11

<b>finding</b> 491:16 512:10 515:1,1,11 597:17 648:25 658:11 719:23	720:3 <b>follow</b> 722:8 <b>follow-up</b> 668:23,25 709:1	512:1,7 513:8 514:3,5,16 515:3 517:7 518:17,24 519:12 520:22,24 521:24 522:7,9 523:4,16 524:8,19 526:9,13,21 527:18 528:3 529:4,23,25 532:6 533:2 534:19 536:3 537:17 542:4,23 543:15 546:1,5 547:11 548:9 549:10 552:7 553:18 556:18 557:8,19 558:16,21 560:20 561:5,11,22,24 562:14,24 563:8 563:25 564:7,9,12 564:20 565:16,17 567:4,16 568:16 568:23 569:7,23 571:7 572:14 573:1 576:16 577:1 578:5,23 579:5,16 580:12 581:7,19 582:3 584:20 587:4 588:6,21 592:21 593:7 597:7,21 598:16 599:7 600:3 603:12 604:3,13 605:5,15 607:1,18 608:4,14 608:22 610:21,23 611:13,22 612:9 612:19 614:15 615:20 616:10 617:14 623:4,5 624:4 626:20,21 627:12 629:2,16 629:18 630:5,7,20 631:24 632:19 634:4 637:16,17 638:12 641:10 645:14 646:9,10	648:2 649:4,17 650:5 651:6 652:9 653:2,10 654:8,19 655:14 657:24 659:15 663:2,15 664:4,13 665:22 666:13 668:6 669:5,25 670:2,14 670:16 671:1,7,22 671:23 672:10,17 673:1,25 674:11 674:23 675:13,22 675:23 676:7 677:7,23 678:8,17 678:19 679:6,14 679:19 680:7,8,20 681:20 682:6 684:14 685:18 686:5,12 687:1,7 691:17 692:25 693:4 694:7,20 695:7 699:21 700:17 701:4 702:14,23 704:9 705:1,24 706:9 709:14 710:6,20 710:21 712:9,23 713:13 715:23 716:22 717:12 718:17,25 719:13 721:13,14,24 723:23 724:5,14 726:1 727:4,17 731:6	477:7 <b>forth</b> 576:5 610:11 614:10 641:3 728:9 <b>found</b> 471:5 474:20,24 475:5,10 485:8,20 487:20 488:12,15 490:24 491:24 493:17 503:14 504:8 547:1,4,18 557:25 558:1 562:2,20 571:19 588:24 596:8,15 597:3 599:12,20 599:23 602:21 606:12,14 618:9 632:6 635:17,21 636:2,9 644:12 645:6 652:3,12 667:17 668:2 669:15 674:2 682:3 702:17 716:1 717:9,24 <b>foundation</b> 562:8 <b>four</b> 549:24 684:8 685:4 705:22 707:8 <b>fourchette</b> 662:7,8 <b>fragrance</b> 568:13 569:11,14 589:2 <b>fragrances</b> 568:21 569:5 588:15 <b>Francis</b> 619:20 <b>FRCP</b> 728:11 <b>free</b> 467:21 603:24 <b>frequency</b> 584:9,12 632:4,7 633:24 645:8
<b>findings</b> 455:12 469:7,8 594:18,22 649:8 650:6 651:2 655:9 699:13	<b>following</b> 559:1 <b>follows</b> 436:7 <b>forearm</b> 586:15 <b>foregoing</b> 728:7 731:4 <b>foreign</b> 635:21,25 636:9,12 636:16,20 637:1 637:10,12,20 <b>form</b> 441:12 442:8 443:12,17 447:6 448:6 449:12,18 450:5,10,17,24 451:10,21 453:7 453:25 454:8 456:14 457:15,25 458:12,16,22 459:16 460:8 462:15 463:2 464:17 465:17 466:1,8 467:7,16 467:20 469:3,18 471:20 478:20 479:14 480:6 483:10 484:23 485:11 486:9,12 486:17 487:14 488:9 489:6 491:19 493:1,10 493:18 494:24 495:16 499:13,22 500:9,22 501:13 501:24 502:10 503:5,19 504:5,16 505:8,21 506:2,10 506:12 507:3,5,24 508:25 509:12 510:21 511:17	<b>forms</b> 563:6 588:9 <b>formulating</b> 721:20 <b>Forrest</b> 476:10,11,18 477:1		
<b>finds</b> 484:19				
<b>fine</b> 519:21 656:8				
<b>finish</b> 609:8				
<b>first</b> 437:5 443:15 446:8 447:7 470:18 502:1 508:13,16 519:20 538:21 539:2,5,10 546:21 575:23 596:5 610:2 619:2 625:21 699:22 703:24 706:4 709:6 725:12				
<b>first-degree</b> 440:11,14,15,18 441:9 627:14,18 627:21				
<b>fit</b> 606:1 709:8,24				
<b>fits</b> 648:15 681:8				
<b>five</b> 501:20,21 502:4,7 502:14,14 520:15 549:20,24 609:18 621:21				
<b>Floor</b> 430:19				
<b>flora</b> 619:18 666:19				
<b>Flower</b> 430:18				
<b>folks</b>				



646:5,14 647:15 648:10,17 649:7 649:13,19 650:3,7 650:11,13,17 705:17,21,25 <b>frequent</b> 647:18 691:16 692:17 <b>frequently</b> 555:1 603:4 654:15 <b>FRIEDMAN</b> 431:2 <b>front</b> 436:24 440:21 443:23 481:15 575:18 617:16 625:4 634:25 689:8 711:3,11 <b>full</b> 703:24 725:12 <b>fumbling</b> 482:23 <b>function</b> 512:25 <b>further</b> 540:15 581:18 582:1 688:5 691:1 708:24 712:12 722:5 727:22 728:7,10,13 <b>Furthermore</b> 712:3 725:20 <b>future</b> 451:1	516:9 <b>Garber</b> 430:7 505:7 506:11 507:4 508:1 514:4 520:23 522:8 529:20,22,24 530:4 538:1,3 557:7 558:15,18 558:20 561:23 563:7 564:8 565:15 590:10,15 590:22 591:2 610:22 611:12,21 612:8,18 626:19 627:11 629:17 630:6 637:15 641:17 646:8 670:1,15 671:21 672:9,16 675:21 676:6 678:18 680:6 710:19 721:12,23 724:8 724:15,17,19 <b>Garber's</b> 582:10 <b>garber@onderla...</b> 430:8 <b>Gardner</b> 464:5 465:24 468:8 <b>GARRARD</b> 430:12 <b>gene</b> 448:14,15,25 450:6 450:11,19 451:6 451:18 453:1,6,9 457:5,5 459:3,5 459:11 460:13 461:10,12 524:20 525:3,8,15 526:14 526:15,25 527:14 527:22,23 529:5 530:12 532:14 672:3,3,6,24 <b>general</b> 437:7 470:1 471:15 472:17 474:11 485:18 575:24	580:16 610:4 691:11 707:15 708:5 <b>generalize</b> 560:14 <b>generalized</b> 512:20 <b>generally</b> 468:16 504:13 511:2 519:5 520:2 529:1 553:8,19 555:10,15 556:15 558:5 559:9 570:20 572:15 577:22 604:7,16 623:24 625:7 643:6,7 690:7 697:9,11,12 698:7 698:16 <b>genes</b> 457:20 504:14,17 504:19 <b>genetic</b> 438:1 441:1 442:1 447:5 448:12,23 450:3 453:5 456:3 458:4,17,18,20 459:25 502:24 503:2,6,9,13,25 504:2,6,7 505:18 505:20,23 506:4 516:25 517:9,21 531:12,18 532:2,9 532:20 543:24 569:25 570:5 604:17 605:9,12 624:16 625:14 626:2 627:1,6,7 651:13,15 672:6 672:12,13 673:9 673:12,16,18,20 673:23 674:1 676:22 677:19 678:2,10,12 684:1 685:15 686:10,25 687:9,19,24,25 707:2	<b>genetically</b> 654:24 <b>genital</b> 433:14 434:10 477:22 478:3 482:7 547:17,19 549:2 552:9 580:3 580:11,14 633:5 636:21 640:23 643:19,23,25 644:9,18 645:9 646:5 648:10 649:14 650:20,22 651:22 694:19 <b>genome</b> 543:22 <b>geologist</b> 562:10 563:24 564:6,18 <b>Georgia</b> 430:14 <b>germ</b> 497:7 701:23 <b>germline</b> 626:16 628:9,12 <b>getting</b> 458:7 460:3 473:1 474:10 612:22 626:1 656:7 <b>GI</b> 505:10 <b>gist</b> 692:24 <b>give</b> 468:13,17 482:24 490:17 500:6 521:13 535:24 565:8 614:7 625:23 633:22 637:2 645:16 659:17 677:8 687:6 701:1,5,22 724:13 <b>given</b> 441:9,13 442:6 518:14,18 539:18 540:10,16,19	541:21 550:20 606:21 611:25 618:6 626:17,22 647:20 671:11 694:6 708:1 714:10,14 727:10 731:5 <b>gives</b> 463:24 619:14 622:9 632:23 <b>giving</b> 591:1 592:19 681:4 <b>gleaned</b> 590:19 <b>gloves</b> 558:12,13 666:3,7 <b>go</b> 444:13 449:15 485:17 487:10 498:14 519:15 520:12 526:24 537:22 538:12,13 539:16 562:21 575:5 580:5 591:25 609:4 619:16 641:7,15 645:20 655:19,20 668:22 674:12 702:2 726:5,12 <b>goal</b> 512:8,10 <b>Godleski</b> 434:2,8 515:1,6,12 515:19 562:20 594:17 595:7,19 596:8,15 597:11 598:2,15 599:19 600:13,15 634:13 634:20 635:3,17 638:20 640:14 699:11 <b>Godleski's</b> 563:17 594:22 595:4,12 596:4 634:10,16,24 636:8 638:18 639:25 640:9
---	---	--	--	---

---

**G**


---

**G**

436:2

**Gallardo**

548:21 562:1

582:10 612:13

671:10 684:10

699:2,16 705:5

**Gallardo's**

702:4,5,6,9 706:19

707:1

**game**

<b>going</b> 468:2 481:12 494:17 496:15 497:2 506:3 507:9 507:10 508:2 509:24 529:10 542:5 547:21 565:3,7,12 582:4 582:9 590:13 591:8 595:3 604:15 639:5 651:7,11 654:1 674:12 677:8 680:18 689:10 691:18 703:9 705:11 714:24 715:11 716:13 721:16 722:7	442:22 444:22 445:17 614:2,21 614:25 615:14,25 616:3,8,23 617:13 617:22 618:15 621:19 622:11 626:23 627:17 628:6 656:22,23 658:4,20,23 659:5 659:10,18 660:1 660:12,18,21 <b>great</b> 443:4,7 445:13 446:4,11,18 578:25 579:7 <b>greater</b> 473:3 613:13 647:11 <b>grossly</b> 570:17 <b>group</b> 483:20 545:15 606:3 652:17,23 653:7 654:12,13 654:14 <b>groups</b> 652:16 <b>grow</b> 570:16 <b>growing</b> 570:17,18 <b>grows</b> 570:15 <b>growth</b> 560:4 601:8,21 639:6 <b>guess</b> 520:12 534:24 538:17 542:15 545:8 559:11 579:6 <b>gunshot</b> 622:16 <b>guys</b> 508:9 <b>gynecologic</b> 464:9 467:24	470:14 562:16 696:23 704:13 <b>gynecological</b> 470:22 703:5 <b>gynecologist</b> 696:17 <b>gynecologists</b> 697:1 <hr/> <b>H</b> <b>half</b> 474:6 544:18 589:16 592:9 <b>hand</b> 470:4 <b>handed</b> 618:23 <b>hands</b> 455:8 <b>Hang</b> 458:15 <b>happen</b> 456:15 476:4 558:2 <b>happening</b> 555:19 <b>happy</b> 494:15 <b>hard</b> 493:20 499:23 551:3 627:2 699:24 <b>Harlow</b> 693:22,24 <b>hazard</b> 471:12 <b>head</b> 455:7 477:8 531:2 726:15 <b>health</b> 562:16,16 669:13 694:14,17,22,25 695:5,10,15,23 710:14,15,15 711:3,13,19 712:7 712:19,19 713:7,9 716:16,17 717:7,9 717:22 718:24	722:8,16 724:2 726:18 727:14 <b>healthy</b> 458:7 460:3 670:6 <b>hear</b> 563:13 <b>hearing</b> 576:5 610:10 720:24 <b>heart</b> 453:21 455:5 <b>heavy</b> 560:17,24 561:18 565:6,12 567:3 568:12,21 569:4 588:14,25 599:11 <b>held</b> 429:18 <b>help</b> 500:19 615:18 620:5 <b>helps</b> 504:23 <b>hereditary</b> 672:3 677:19 <b>hereinbefore</b> 728:9 <b>high</b> 454:13 475:24 527:15 725:13 <b>high-grade</b> 502:16,25 503:10 504:1,9,18 505:13 569:21 570:3 606:2,10 646:18 647:7,10 648:18 <b>higher</b> 472:4,16,16 474:11 628:11 647:1,2,18 648:17 652:18,21 652:25 653:9 654:2,16 <b>highest</b> 471:10 648:16 <b>highly</b> 607:25 612:23 666:14 669:10	671:13,17 672:18 <b>Hill</b> 492:12,16 508:23 509:1,9,20 510:2 <b>histologic</b> 477:21 485:19 496:13 498:8 501:22 502:7 504:15,25 638:24 <b>history</b> 437:25 438:2,7 439:10,17 441:2,9 441:14,17 442:16 443:10,13,22 444:15,23 445:4 446:14 447:4 454:17 457:22 459:24 460:10 461:8,12,22,24 463:24 464:10 467:5,14 468:13 468:18 509:17 514:19 515:17 522:23,24 523:10 532:16,19 533:17 534:2,16 535:9,21 536:19,22 537:11 543:21 576:20 578:21 579:2,14 586:13 613:22,24 614:6,9,12,16 615:13 616:24 617:18,19 618:4,5 618:10 621:5,6 622:20,23 624:1 626:17 627:3,6,9 627:13,22 628:1,2 628:10 629:12,21 630:1,11 632:23 655:19 656:14 657:3,22 658:14 658:16 659:13,18 660:15 661:5 671:20,25 672:11 672:19 673:6 674:14 679:25 682:7 683:15
---	---	---	--	---

699:13 709:20 710:10 <b>histotype</b> 650:24 <b>histotype-specific</b> 644:2 <b>histotypes</b> 499:2 501:7 646:20 647:8 <b>hit</b> 527:3 528:18 531:18 532:20,22 <b>hits</b> 532:1,3,12,18,22 <b>hold</b> 481:19 <b>home</b> 587:8 624:20 631:9 <b>homogeneous</b> 654:25 <b>hope</b> 608:23,23 <b>hopefully</b> 449:23 <b>hormone</b> 521:8,16 522:24 523:11 532:15 679:25 <b>Hotel</b> 429:18 <b>house</b> 587:9,16,17,18 <b>Houston</b> 620:1 <b>human</b> 543:22 555:11 600:22 723:1 727:14 <b>humans</b> 684:5 <b>hundreds</b> 687:16 <b>husband</b> 573:21 586:10 587:15 593:17 <b>Huston</b> 434:6,13 618:19,25	620:18,25 622:5 655:24 656:4,10 <b>Huston's</b> 626:9 <b>hypothetical</b> 458:16 460:9 484:9 484:25 485:3 486:11 520:15,20 521:1,5,12,20 545:8 551:13,14 657:13 658:9 659:9 660:7 <b>hypothetically</b> 466:19 486:1 611:18 639:24 657:15 658:21 659:23,25 <b>hypotheticals</b> 557:9 <b>hysterectomy</b> 438:10 460:23 462:12,24 463:12 585:1  <b>I</b> <b>IARC</b> 563:1 564:1,13,24 566:16 <b>IBS</b> 513:11 <b>idea</b> 501:25 636:15,25 638:8 <b>identifiable</b> 537:3 <b>identification</b> 444:11 445:12 452:16 480:15 482:9 490:6 496:8 497:25 595:9 615:8 618:21 634:22 640:25 656:1 661:24 667:8 689:1 <b>identified</b> 448:13 534:2 542:22 543:14	546:21 670:19 726:17 727:14 <b>identify</b> 437:21 451:6,18 514:1 532:24 543:23 605:20,21 616:21 675:8 676:25 678:2 679:8 <b>II</b> 572:6 <b>iii</b> 722:17,18,20 <b>illness</b> 511:21 <b>imagine</b> 699:25 <b>immediately</b> 519:18 <b>impact</b> 447:13,18 460:15 587:23 674:3 700:5 <b>imperative</b> 729:14 <b>implies</b> 604:17 <b>important</b> 468:1 492:3 573:2 618:3 <b>impossible</b> 521:22 632:18 <b>inability</b> 540:16,19,24 541:13,21 542:19 <b>inaccurate</b> 695:25 <b>inaccurately</b> 524:25 <b>incessant</b> 558:8 675:4 <b>incidence</b> 475:14 <b>incision</b> 465:6 <b>include</b> 455:7 462:8,21	463:20,25 464:1 492:11 512:19 708:13 717:2 724:4 725:24 726:3 727:2,6,15 <b>included</b> 452:3 476:17 483:18,22 488:18 514:19 598:8 606:16 695:22 696:1,3 704:25 705:3 709:12,25 713:17 714:18 717:16,18 718:6 718:19 720:5,15 723:21 724:23 725:2 <b>includes</b> 715:17 726:2 <b>including</b> 598:5,20 635:25 685:13 695:15 716:11 718:7 <b>incomplete</b> 458:13,16 460:9 <b>inconsistent</b> 614:1 711:16 714:7 714:20 <b>increase</b> 460:11 478:24 527:15 533:17 539:18 540:10 544:2,6 577:22 613:16 666:20 <b>increased</b> 441:8,15 446:21 451:2,24 454:22 461:5,14 471:6,18 471:24 473:17 474:20,24,25 475:19 478:10,14 478:18 479:12 488:16 490:24 524:6,16 525:16 525:20 530:16 531:5 540:8 628:3 637:22 649:8	650:7,8 658:17 667:23 668:3 693:14 <b>increases</b> 440:12 441:2 449:1 451:7,18 459:11 469:19 476:3 496:12 528:7 530:14 540:4 577:24 632:8 677:11 679:21,23 <b>Independent</b> 538:22 539:11 <b>INDEX</b> 432:1,21 <b>Indiana</b> 431:5 <b>Indianapolis</b> 431:5 <b>indicate</b> 532:19 602:25 614:20 723:2 726:22 <b>indicated</b> 587:10 699:14 708:6,11 709:21 <b>indicating</b> 710:4 <b>indication</b> 455:11 540:25 541:14 629:14 <b>indicative</b> 598:4 635:25 672:23 723:18 725:21 <b>individual</b> 503:8 509:6,10,14 510:1,20 518:15 519:10 526:5 528:15 529:16 531:9,19 537:18 537:20 546:9 552:23 572:9 584:22 588:14 686:20 708:9 <b>individually</b> 716:10
--	--	---	--	---

<b>induce</b> 505:17,19	659:16,17 660:20 661:4 668:15	<b>intercourse</b> 697:14	554:11	602:7,17 606:1,24
<b>induces</b> 505:23 556:7	669:23 705:20 708:4,9 720:25	<b>interested</b> 728:15	<b>JAMA</b> 692:20	612:14 683:5,6 684:10
<b>infancy</b> 549:12	722:3	<b>interleukins</b> 560:4	<b>Janssen</b> 554:19	<b>Judkins'</b> 575:14 576:10
<b>infant</b> 549:15	<b>ingredients</b> 569:12,15 588:17	<b>Internet</b> 726:8	<b>January</b> 493:25 494:8 496:3 602:12 689:12,16	577:4,10,12 579:13,20,24 584:18 588:1,20 589:5 593:17 594:4,18,23 595:4 595:20,24 600:2 603:10 608:11
<b>infection</b> 513:13 666:20 669:13	665:13	<b>interpretation</b> 474:16	<b>Japan</b> 572:6	<b>July</b> 602:21 603:8
<b>infections</b> 544:5 664:12,16	<b>inhalation</b> 548:21,25 549:3 580:1,9	<b>interrupted</b> 550:14 676:17	<b>jaw</b> 453:21	<b>June</b> 602:13,14
<b>infertile</b> 521:14	<b>inherited</b> 455:15 456:3 457:24 517:12	<b>Interruption</b> 487:1 664:22	<b>jaws</b> 455:5	<b>jury</b> 516:2,8 565:4,8
<b>infertility</b> 521:18,19 675:5 697:15	523:22,24 526:14 543:24 604:17 605:1,9,12,17 611:2 626:16 627:7 628:9 672:13 673:12,13 673:15,16 675:2 676:22 677:11 678:1,20 684:23 684:25 685:3,6 687:13,24	<b>interval</b> 472:8,11 544:17	<b>Jenga</b> 516:9 527:1	
<b>inflammation</b> 555:7,11,13,15,22 555:23 556:8,24 557:2 559:12,15 559:18,19 600:16 601:19 602:4 638:21 639:4,14 639:16,22,23 663:10,11,13,14 663:17,23 664:1,2 664:6 665:16,24	<b>injuries</b> 527:8 529:9 532:8 532:12 572:16 578:18 681:11	<b>intervals</b> 583:14	<b>JERSEY</b> 429:1	<b>K</b>
<b>inflammatory</b> 532:21 554:7,14 555:1,5,18 556:1 556:3,4 557:15 558:7,14,17 559:3 559:8,24 568:20 569:4 600:24 601:1,6,10 639:11 663:1 664:8 666:4 684:20	<b>injury</b> 527:3 528:21,25	<b>intervention</b> 460:20 466:11	<b>job</b> 535:2	<b>karyotypes</b> 687:18
<b>information</b> 456:4 464:14 492:7 506:19,20 590:5 591:14 613:14 620:7 624:10,25 625:23 628:4 631:7,14 643:18 657:20 658:1,10	<b>insinuate</b> 488:1	<b>intraperitoneal</b> 606:16	<b>jobs</b> 689:22	<b>keep</b> 482:23
	<b>Institute</b> 452:11,24 453:12 454:10	<b>introduced</b> 554:8	<b>Johnson</b> 429:4,4,12,12 430:20,20 431:6,6 554:20,20,22,22 567:20,21 699:15 699:15	<b>keeps</b> 687:21
	<b>instruct</b> 590:13 591:9	<b>investigation</b> 565:24 587:1 599:4 637:8	<b>Johnson's</b> 585:22	<b>kidney</b> 578:25 579:9
	<b>Instruction</b> 432:22,23	<b>involved</b> 573:11 597:16	<b>Join</b> 508:1	<b>kill</b> 456:23
	<b>INSTRUCTIONS</b> 729:1	<b>iron</b> 638:14	<b>judgment</b> 693:9	<b>kind</b> 587:6 597:19 660:25 705:3,6
	<b>insufficient</b> 550:21 700:15	<b>irregularly</b> 662:9	<b>JUDITH</b> 429:18 432:2,8 436:5 728:5 731:4 731:12	<b>Kleiner</b> 477:4 516:2,8 526:25
	<b>intend</b> 580:5,7	<b>irritating</b> 589:2	<b>Judkins</b> 434:3 575:19 576:5 576:13,18 577:7 578:12,20 583:25 584:2 585:3,8,14 586:12,21 587:1 587:15 589:12,14 590:3 592:7,8,14 593:11,14 595:8	<b>knew</b> 442:1 459:2 533:8 543:20 660:17
		<b>irritation</b> 665:16		<b>know</b> 438:11 439:9 440:19,19 448:16 454:5 459:1 463:25 468:5 475:22 486:15,24 489:16 490:18 491:7,20 493:11
		<b>issue</b> 513:18 587:17 720:11		
		<b>issued</b> 575:13		
		<b>issues</b> 627:5		
		<b>J</b>		
		<b>J&amp;J</b>		

494:10,22 496:18	<b>known</b>	433:4 444:9	559:15 584:14	722:8
496:24 499:25	457:4 472:13	<b>LBONDURANT...</b>	<b>LIABILITY</b>	<b>live</b>
502:5 506:14,18	542:12 543:18	433:5 444:10	429:5	587:7
508:3,6 514:7	544:1 547:16	<b>lead</b>	<b>lie</b>	<b>lived</b>
516:23 517:5,11	637:21 671:12	442:3 681:11	554:4	578:7
517:13,19,21	677:10,19 680:24	700:11	<b>life</b>	<b>lives</b>
518:1,4 519:9	681:8	<b>learn</b>	551:6 566:5	613:18
520:17 524:4	<b>knows</b>	591:4 592:18	<b>lifetime</b>	<b>living</b>
530:14 532:17	724:18	<b>learned</b>	441:3 524:12,16	619:19
534:20,21 536:14	<hr/> <b>L</b> <hr/>	544:3,4 590:16	525:9,16,19,20,20	<b>LLC</b>
537:14 542:20	<b>L</b>	591:7	525:23 528:23	430:7
545:24 549:20	430:7	<b>learning</b>	530:15 566:2	<b>Lloyd</b>
551:12,19 553:12	<b>lab</b>	452:22 454:6	<b>ligation</b>	593:24
561:18 562:6	567:22 706:7	<b>leaving</b>	633:15	<b>LLP</b>
565:11 566:5,8,18	<b>lack</b>	524:20 711:25	<b>limited</b>	430:17 431:2
566:20,21 567:19	540:21,22 541:10	<b>led</b>	488:20 644:4 712:1	<b>local</b>
568:6,9 569:3,11	612:1	578:19 687:20	<b>line</b>	555:8
569:14 570:24	<b>laparoscopy</b>	725:2	490:22 496:16	<b>localized</b>
572:24 584:15	465:5	<b>left</b>	507:17 619:6,6,17	560:2
591:5 593:4 594:9	<b>laparotomy</b>	596:1,1 635:4,7,13	656:5 730:2 732:3	<b>logarithmic</b>
595:1 597:19	465:5	636:3 703:22,23	<b>lines</b>	570:16
598:12 599:10,13	<b>large</b>	<b>left-hand</b>	490:11	<b>long</b>
604:5,19,23 618:1	455:7 505:19	498:14 538:21	<b>list</b>	452:22 499:10
619:11,22 621:18	<b>largest</b>	<b>legitimate</b>	454:20 511:14,20	543:6 547:15
623:2,8,21 625:17	489:12	464:23	512:25 564:14	570:14 571:9,10
625:21,22,25	<b>lasted</b>	<b>length</b>	574:10 721:10,22	571:18 581:8,21
626:12,25 630:15	591:17 592:11	706:1	<b>listed</b>	589:18,21 724:19
631:5,10,11	<b>late</b>	<b>lesions</b>	462:18 494:4	726:19
632:22 637:18	556:17,20 557:14	505:13 661:10	<b>listing</b>	<b>long-term</b>
644:11 654:4,17	557:25 558:1	<b>let's</b>	690:1	528:20 587:11
655:1,5,6,11	<b>latency</b>	473:19 480:10	<b>lists</b>	<b>longer</b>
659:1 668:16	571:3,16,22,23	520:12 521:4	638:13 722:2	613:18
671:11 677:18,21	572:1	524:3 575:5	<b>literature</b>	<b>look</b>
678:6,22 680:11	<b>lawsuit</b>	609:17 615:2	475:23 476:22	440:21 445:23
684:11,15 685:23	553:25	621:20 640:20	477:16 510:18	446:8 451:23
686:14 687:11	<b>LAWYER'S</b>	645:20 653:22	527:9 542:7 550:9	465:3 470:8 471:1
690:18 692:5	432:17 732:1	661:18 667:4	584:11 585:5	473:25 485:15
700:1 709:9 719:1	<b>lawyers</b>	673:13 682:17	604:16 605:18	490:9,21 491:6
720:24 721:7,21	592:7,13	692:12 700:24	632:24 678:21	503:8 509:15
<b>knowable</b>	<b>lay</b>	722:15 725:5,7,8	723:1	511:2 545:3,13
687:5	562:7	726:5,12	<b>LITIGATION</b>	546:10 562:21
<b>knowing</b>	<b>LBONDURANT...</b>	<b>letters</b>	429:6,24 432:21	563:16 566:19
447:11 510:13	433:7 445:10	692:19,24 693:3,6	<b>little</b>	574:18 580:17
<b>knowledge</b>	<b>LBONDURANT...</b>	693:18,20 694:4,9	536:12 549:18	582:17 596:13
586:18	433:8 445:11	719:21	562:8 606:8	613:8 622:2,22
<b>knowledgeable</b>	<b>LBONDURANT...</b>	<b>level</b>	613:25 667:19	623:24 626:3
506:1,4		523:13 555:17	686:19 711:23	648:14 650:18



655:20 667:11 668:8 669:7 672:22 673:6 688:11 691:16,18 705:13,15 713:4 713:23 714:11,15 715:11 719:14 722:15 725:5,7,8 726:7 <b>looked</b> 470:2,15 471:3 478:12 479:1,6 483:21 488:25 490:16 491:23 498:12 510:24 514:13,17,20 527:6 537:2 541:21 550:10 551:9 553:6 566:20 593:4,6 595:19 597:4 628:5 634:13 635:3 642:12 646:11,13,14,16 647:5 658:25 662:22 668:12 687:17 691:19 705:18 713:17 719:15 725:10 <b>looking</b> 444:14 463:7 479:10 482:20 483:2,11,13,14,25 484:12,22 486:3 489:1 490:10,10 490:13 509:13 511:19 539:1 546:8 554:17 583:8 584:11 596:3,17 613:10 622:19 629:23 635:9,10,22 638:23 643:17,19 644:23,25 645:12 645:15 647:4,9 648:15 651:18 658:13 662:4	665:2 667:18 689:16 691:12,21 692:5,11 703:12 711:9,18 715:15 715:16 716:9,10 717:1 720:13 <b>looks</b> 509:1 <b>Los</b> 430:19 <b>lot</b> 474:12 549:21 557:9 558:9 572:4 574:15 599:8 <b>loud</b> 530:8 <b>LOUIS</b> 429:8 <b>low</b> 493:14,19 512:23 538:25 539:17,18 540:10 611:25 698:21 712:2 <b>low-grade</b> 502:16 504:9,20 505:11 570:3 <b>lower</b> 655:2 662:6 <b>lumped</b> 478:8 <b>lunch</b> 575:2 <b>lung</b> 442:25 444:20 445:18 446:6,6,25 447:8,16 <b>Lydia</b> 434:6,13 618:19,25 620:1 655:24 <b>lying</b> 466:12 <b>lymph</b> 595:25 635:5,15 636:4,23 <b>lymphocytes</b> 602:3 639:1,20 <b>lymphoma</b>	442:20,23 444:21 444:23 445:15,17 447:1 <b>Lynda</b> 436:15 <hr/> <b>M</b> <hr/> <b>M</b> 430:2 431:2 <b>M.D</b> 429:18 430:2 432:2 432:8 436:5 728:5 731:4,12 <b>macrophages</b> 559:25 601:3 602:3 639:2,21 <b>Mae</b> 619:17,20 656:20 <b>magnesium</b> 598:5,18 599:9 637:4 <b>main</b> 501:21 502:7,15 <b>majority</b> 604:22,25 605:8 674:20 675:10,18 676:3 677:4,17,21 679:4 697:20 698:2 <b>makeup</b> 651:15 <b>makeups</b> 651:13 <b>making</b> 449:15 530:2 553:11 563:12 629:15,20 <b>malignant</b> 706:7 <b>man</b> 468:5 538:17 <b>manage</b> 696:14,21 <b>manner</b> 570:16 <b>MARGARET</b> 430:2	<b>margaret.thomp...</b> 430:3 <b>mark</b> 444:2 445:2 452:9 480:10 482:4 490:1 497:20 595:3 615:2 618:16 634:18 640:20 655:22 661:18 667:4 688:22 <b>marked</b> 433:2 435:1 436:22 444:10 445:11 452:15 480:15 482:9 490:6 496:7 497:25 537:24 575:20 595:8 610:12 615:7 618:20,24 634:21 640:25 655:22,25 661:23 667:8 688:19,20,25 689:24 721:1,8 <b>MARKETING</b> 429:5 <b>marking</b> 496:1 <b>mass</b> 440:5 <b>masses</b> 440:3 <b>material</b> 598:5 <b>materially</b> 650:24 <b>materials</b> 574:9,10,22 603:22 721:5,9,22 <b>maternal</b> 439:11,19 441:10 442:22 443:4,6 444:18,21,22 445:13,14,16,16 445:17 446:1,2,10 446:18 458:5 460:1 578:24	621:19 659:19 <b>math</b> 531:1 549:22 <b>matter</b> 551:25 552:5 576:5 610:10 653:1 686:6 <b>McTiernan</b> 476:14,22 <b>McTiernan's</b> 476:9 <b>MD</b> 445:6 <b>MDL</b> 429:4 433:20 493:25 496:2,6 610:4 <b>mean</b> 449:3 458:25 471:23 472:14 483:17 505:19 509:3 515:24 519:14 520:6 527:11,13 546:25 552:8 553:25 556:12 557:12 560:18 564:13 601:6 605:4 624:21 638:5 639:23 651:10 652:20 653:25 668:17 673:10,11 678:22 679:17 680:4,17 687:4 696:10 709:10,19 711:3 712:14 719:7 <b>meaning</b> 600:5 605:19 638:6 723:5 <b>means</b> 456:3 471:21 530:18 541:12 604:4,18 635:15 678:20 <b>meant</b> 475:13 494:15
--	--	--	---	---

496:21 497:3 696:12 <b>mechanism</b> 568:21 569:4 <b>median</b> 668:24 <b>medical</b> 433:3,6 434:4,15 444:3,8 445:9 452:21 465:16 467:22 468:13,17 477:9 502:5 510:10,18 514:17 514:19 540:4 545:12 574:19,21 586:17,20 588:8 615:3,6,11 656:14 657:3 659:5 661:21 662:3 678:21 683:15 708:1 <b>medically</b> 696:14 697:3 <b>medicine</b> 510:23 <b>medulloblastoma</b> 454:18 <b>medulloblastoma...</b> 455:1 <b>medulloblastomas</b> 453:18 <b>meet</b> 573:18 574:1 <b>meetings</b> 594:1 <b>member</b> 626:25 <b>members</b> 440:24 454:17 627:15 <b>men</b> 451:25 <b>menarche</b> 549:17 <b>menses</b> 697:13 <b>mention</b>	447:15 586:16 587:14 <b>mentioned</b> 491:9 600:7 601:20 656:18 <b>Meridian</b> 431:4 <b>mesothelioma</b> 566:22 <b>meta-analysis</b> 489:17 641:3 726:21 <b>metal</b> 568:13 <b>metals</b> 560:17,24 561:18 565:6,12 567:3 568:21 569:5 588:15,25 598:8 598:20 599:10,11 599:11 <b>metastasized</b> 603:11,15 <b>metastatic</b> 701:25 <b>methodology</b> 491:14 510:6,19 514:11 522:14,21 553:14 586:5 <b>methods</b> 487:7 668:9 <b>Michael</b> 429:20 430:17 728:2,18 <b>michael.zellers@...</b> 430:18 <b>middle</b> 530:25 595:17 609:13,15 <b>migration</b> 548:15 549:3 552:17 579:21 631:18 <b>Miller</b> 429:20 728:2,18 <b>million</b> 472:12,25 473:12	473:12 474:8 <b>Mills</b> 492:21 <b>mind</b> 447:8 722:10 <b>mine</b> 593:25 <b>mineral</b> 564:5,19 <b>mineralogist</b> 564:11,18 <b>minerals</b> 563:22 <b>Minnie</b> 619:18 <b>minute</b> 481:20 482:24 591:23 645:16 <b>minutes</b> 508:8 589:22 591:18 592:12 609:18 621:21 <b>Miriani</b> 614:4,5,11,19 <b>Miriani's</b> 617:24 <b>misreporting</b> 484:15 <b>misrepresentation</b> 530:5 <b>Missouri</b> 429:8 615:10 659:4 <b>misspoke</b> 494:13 495:6 497:8 616:20 663:7 <b>misstate</b> 616:16 <b>misstates</b> 495:17 507:5 588:22 607:19 676:18 710:8 724:6,6 <b>mistake</b> 497:4,4 <b>model</b> 540:22 541:8 <b>molecular</b>	502:12,22,22 <b>moment</b> 544:9 <b>Montgomery</b> 430:4 <b>month</b> 497:16 <b>months</b> 668:11,13 <b>morning</b> 436:12,13 495:2 499:10 <b>mother</b> 439:14,20,21 440:18,19 444:19 456:7,17 458:5 460:1 621:15,19 622:11,15,21 623:1,12,14,22 624:3 626:9 631:2 <b>mother's</b> 579:9 622:6,10,10 624:7 <b>motion</b> 449:20 <b>mouth</b> 467:9 533:9 <b>move</b> 449:4,8 455:22 457:6 692:12 <b>mucinous</b> 490:25 494:11,20 495:12 496:20,25 499:2 501:7,16 502:17 504:8 505:9 506:9,13,21 507:2,7,20 508:4 534:3,4 714:2 717:20,25 718:8 718:12,22 719:2 719:11 <b>multifactorial</b> 441:25 512:15 516:3,21 523:18 674:13 675:1 <b>multiple</b> 457:16 477:23	512:16 513:13 532:22 605:21 630:2 676:19,23 681:10 684:4 687:19 <b>multiplied</b> 549:23 <b>multivariant</b> 546:10 <b>mutated</b> 504:14,18,20 <b>mutating</b> 687:21 <b>mutation</b> 448:23 450:4,12,15 452:25 453:5 457:4,23,24 458:4 458:18,18,20 459:25 505:20,23 518:7,8 523:22,25 524:20 525:4,9,12 525:13,15 526:7 526:14 527:1,14 527:23,23 528:22 528:24 529:6 530:12,17,19,22 543:24 605:2,9,12 611:2 626:16 627:1,7,7 628:9 628:12 672:3,3,6 672:13,13,25 675:2 676:22 677:11,19 678:2 678:10,12 684:24 685:15 686:25 687:13,24,25 707:2 <b>mutations</b> 446:24 450:21 461:12 502:25 503:2,7,9,13,25 504:2,6,7 505:18 506:5 516:25 517:10,11,14,21 527:8 531:12 532:14,17 570:5 572:17 577:23,25
--	--	--	--	---

578:8,13,14,15 613:16,19 626:3 673:9,12,17,19,20 673:23 674:1 684:1,4,12,17,20 684:23 685:7,10 685:22,24 686:3 686:10,15,23 687:9,12,19 <b>Mutch</b> 699:25	514:24 519:24 520:8 532:1 544:24 565:2 578:23 582:12 601:19 621:21 630:18 631:3 650:11 658:1,10 660:23 661:4 681:11 689:4 699:22 700:4 720:10 <b>needed</b> 669:24 <b>needs</b> 528:1 <b>negate</b> 515:13 <b>negated</b> 554:4 <b>negative</b> 438:1 441:1,7 624:19 626:10 628:23 630:16,18 631:2 <b>neither</b> 454:16 465:23 466:2 583:17 674:19 699:11 728:13,14 <b>neutral</b> 613:13 <b>never</b> 497:6 515:21 536:6 542:24 576:13,14 576:24,24 577:3 594:3 610:18,19 611:9 629:19 683:18,21 722:10 <b>nevoid</b> 455:20 <b>new</b> 429:1 451:6,18 479:20,22 494:18 508:8 534:12 543:12 583:24 690:12 699:16,23 708:4,8	<b>Newport</b> 430:9 <b>next-to-the-last</b> 722:24 <b>Nicholas</b> 538:18,19 <b>nickel</b> 588:25 <b>night</b> 470:20 <b>NIH</b> 452:11 <b>nine</b> 637:3 <b>nineties</b> 577:20 <b>ninety</b> 577:19 <b>node</b> 635:6,16 636:5,23 <b>nodes</b> 595:25 <b>Nods</b> 726:15 <b>non-coffee</b> 545:22 <b>non-Hodgkin's</b> 442:20 445:17 447:1 <b>nonasbestiform</b> 562:23 <b>nonasbestos</b> 563:5,23 <b>noncancer</b> 455:4 <b>noncancerous</b> 453:20 <b>nonfibrous</b> 596:20,25 <b>noninherited</b> 604:18 605:19 675:3 <b>nonirritating</b> 554:12,24 <b>nonmalignant</b> 439:22 444:19 <b>nonmetallic</b>	598:9,21 599:14 <b>nonresponsive</b> 449:5 455:23 457:7 <b>nonserous</b> 479:1 488:17 <b>nonsmall</b> 444:20 <b>nonspecific</b> 513:16 558:2 647:16 <b>nontalc</b> 598:5 <b>normal</b> 529:6 581:1 666:18 <b>North</b> 431:4 <b>Notary</b> 429:21 728:4,21 731:20 <b>notation</b> 621:14 <b>note</b> 444:4 <b>noted</b> 727:25 729:11 731:7 <b>NOTES</b> 432:17 732:1 <b>November</b> 444:4 <b>nulliparity</b> 675:5 <b>number</b> 433:2 435:2 463:8 482:13,17 483:12 483:15 484:3,15 486:4 489:13 490:17 495:9 517:25 530:25 531:12 574:12 582:20 605:13 619:14 632:21 650:19 679:12 680:2 711:6 726:6 <b>numbers</b> 493:2,5,15,19,21 494:25 583:19	<b>numerous</b> 447:4 654:10,22 673:2 <b>nurse</b> 662:15,19 <hr/> <b>O</b> <hr/> <b>O</b> 436:2 <b>O'Brien</b> 492:20 493:23 497:14 498:11,13 501:3 537:25 662:23 665:6 691:12,15 692:21 694:6 719:20,22 720:15 <b>O-C-A-C</b> 485:20 <b>oath</b> 553:20 554:3,5 586:9 629:4 702:15 <b>obesity</b> 521:9,17 522:25 523:12 532:16 543:7,8 <b>object</b> 441:12 442:8 443:12,17 447:6 448:6 449:11,18 450:5,10,17,24 451:10,21 453:7 453:25 454:8 456:14 457:15,25 458:12,15,22 459:16 460:8 462:15 463:2 464:17 465:17 466:1,8 467:7,16 467:20 469:3,18 471:20 478:20 479:14 480:6 483:10 484:23 485:11 486:9,12 486:17 487:14 488:9 489:6
<hr/> <b>N</b> <hr/> <b>N</b> 430:1 431:1 432:5 436:2 <b>name</b> 477:7 563:23 622:9 <b>named</b> 470:18 <b>names</b> 619:12,15 622:6 <b>Narod</b> 720:12 <b>National</b> 452:11,24 453:12 454:10 <b>natural</b> 511:4 <b>NCI</b> 433:9 452:14 <b>NCRA</b> 728:19,20 <b>near</b> 662:6 <b>nearly</b> 547:3 <b>necessarily</b> 442:4 542:25 600:20,25 639:5 651:4,10 652:19 680:3 <b>necessary</b> 729:4 <b>need</b> 448:7 481:5 490:9 500:3 507:13				

491:19 493:1,10 493:18 494:24 495:16 499:13,22 500:9,22 501:13 501:24 502:10 503:5,19 504:5,16 505:7,21 506:2,10 506:11 507:3,4,13 507:24 508:25 509:12 510:21 511:17 512:1,7 513:8 514:3,4,16 515:3 517:7 518:17,24 519:12 520:22,23 521:24 522:7,8 523:4,16 524:8,19 526:9,13 526:21 527:18 528:3 529:4,23,24 532:6 533:2 534:19 536:3 537:17 542:4,23 543:15 546:1,5 547:11 548:9 549:10 552:7 553:18 556:18 557:7,19 558:15 558:20 560:20 561:5,11,22,23 562:14,24 563:7 563:25 564:7,8,12 564:20 565:15,17 567:4,16 568:16 568:23 569:7,23 571:7 572:14 573:1 576:16 577:1 578:5 579:5 579:16 580:12 581:7,19 582:3 584:20 587:4 588:6,21 592:20 592:21 593:7 597:7,21 598:16 599:7 600:3 603:12 604:3,13 605:5,15 607:1,18 608:4,14,22	610:21,22 611:12 611:21 612:8,18 614:15 615:20 616:10 617:14 623:5 626:19,21 627:11 629:2,16 629:17 630:5,6,20 631:24 632:19 634:4 637:15,17 638:12 641:10 645:14 646:8,10 648:2 649:4,17 650:5 651:6 652:9 653:2,10 654:8,19 655:14 657:24 659:15 663:2,15 664:4,13 665:22 666:13 668:6 669:5,25 670:1,14 670:15 671:1,7,21 671:23 672:9,16 673:1,25 674:11 674:23 675:13,21 675:23 676:6 677:7,23 678:8,17 678:18 679:6,14 679:19 680:6,8,20 681:20 682:6 684:14 685:18 686:5,12 687:1,7 709:14 710:6,19 710:21 712:9,23 713:13 715:23 716:22 717:12 718:17,25 719:13 721:12,14,23	724:5,9,13,14 726:1 727:4,17 <b>objections</b> 724:21 <b>observed</b> 540:21 541:1,18 <b>obstetrician</b> 696:16 <b>obstruction</b> 513:5 <b>obtain</b> 624:24 <b>obtained</b> 483:7 486:25 487:4 590:5 591:14 <b>obvious</b> 611:3 <b>obviously</b> 592:22 624:10 662:10 705:5 <b>OCAC</b> 479:21 483:14 485:20 487:20,25 488:2 <b>occasion</b> 593:13 708:17 <b>occasions</b> 673:3 676:19 <b>occupational</b> 587:11 <b>occur</b> 683:25 <b>occurrence</b> 581:5 <b>October</b> 573:16 <b>odds</b> 648:22 654:2 704:18 <b>OF7</b> 647:4 <b>offering</b> 567:8 <b>offhand</b> 452:8 <b>oftentimes</b> 696:22	<b>oh</b> 446:1,11 448:21 477:6 483:21 554:20 688:13 724:15 <b>okay</b> 436:17 443:24 444:1,16 446:11 446:12 448:8 449:10,13 454:4 459:21 468:11 477:6,20 478:15 481:17,21 482:24 485:4 498:16 502:21 508:17 520:5,5,7,10 529:24 530:3 534:10 539:6,9 541:16 547:23 558:22 573:8 591:11 599:2,25 603:9 609:2 619:7 619:17 621:13,23 624:6 653:17 656:24 660:8,9 688:10 689:5,21 691:4 692:13 712:18 715:4 719:18 722:15 723:15 725:7,9 726:7,12 <b>old</b> 510:25 577:7 578:2 578:2,13 613:2 623:6,8,15,18,20 623:21 <b>older</b> 549:18 <b>once</b> 551:6 570:17,23 571:17 585:2 589:4 594:2 646:15,15,23,25 647:17 687:20 691:2,22 <b>oncologist</b> 464:9 467:24	696:24 <b>ONDERLAW</b> 430:7 <b>one-year</b> 668:13 <b>ones</b> 483:20 494:3 498:12 542:13 675:2 <b>ongoing</b> 557:16 <b>open</b> 551:1 581:12,13,25 634:6 <b>operate</b> 697:6 <b>operates</b> 555:11 556:6 <b>operating</b> 697:2 <b>operative</b> 438:9 462:11,24 463:12 <b>opinion</b> 437:14 441:19 476:9 478:2 486:7 496:11 515:14 526:4,12,20 527:24 528:14 529:1,7,14 531:3 532:5 533:1,14 535:6,24 536:14 536:21 539:24 540:1,2 541:15 542:2 546:15 547:6,10 550:6,20 552:2 553:1,8 560:7,21 566:12 567:1,5,8 568:17 576:9 578:1 587:23 588:16,19 594:22 607:14 610:14,20,24 633:2,19 637:7 640:2,10,15 641:6 641:9 674:3,7,10 679:3,7 686:19
--	---	--	---	---

687:6 694:10	451:19,23 452:2	526:19 527:16,25	632:25 633:20	453:21 455:5 458:9
699:3,18 700:6,16	453:11,16 456:8	528:7,11,15,19	634:2 637:14,22	459:18 460:5
701:2,5,22 706:4	456:11,21,23,24	529:2,16 530:21	638:10,16 640:4	471:14,17 548:25
706:17	456:24 457:21	531:6,11,15 532:4	640:24 643:15,20	552:18 553:4,5
<b>opinions</b>	458:5,7 459:12,15	532:25 533:12	643:25 645:9	579:25 634:7
437:2 492:4 535:3	459:19 460:1,3,11	534:15,17,18	646:6 648:11	635:4,7,14 636:22
552:6 560:18,19	460:12,16 461:6	535:8,9,11,16,19	649:14 650:23	<b>ovary</b>
565:8 568:11	461:15 462:4,7	535:20,21 536:2	651:5,11 652:20	437:13,19 440:5
575:13 576:3	468:3 469:17,20	536:17 537:5,11	652:25 653:9,19	454:2,13 472:1
588:14 591:2,5,21	471:9,10,19 472:1	538:24 539:12,19	654:16 655:2,12	548:19 596:1
592:19 595:13	472:15,20,22,23	540:11 543:5,11	658:18,20 659:6	636:4 701:23,24
599:3 610:9	473:8,15,17,19	543:13,17 544:2,6	659:11,14 660:12	702:1,3
634:11 653:1	474:4,5,9,10,13	546:18,24 547:4,7	660:15 666:12	<b>overall</b>
654:18 681:4,5	474:21,24 475:1	547:17 548:1,4,17	667:1,7,14,20,24	476:2 498:17 655:2
688:8 694:5	475:16,20,25	548:23 550:7,23	668:4,20,24 669:4	725:13
707:15,20,23,25	476:3,24 477:17	551:11 553:13	669:12,16,23	<b>ovulation</b>
708:5 720:22	478:18 479:11,13	556:16,20,21	670:11,12,20,22	558:8 675:4
721:7,21	480:14 482:8,14	557:5,14,17,25	671:5,11,15	<b>oxidative</b>
<b>opportunity</b>	482:18 483:6,8,23	558:1,10 559:24	673:19,19 674:8	560:2
573:18 607:5	484:14 485:7,10	559:25 560:8,16	674:12,16,21,25	
<b>opposed</b>	485:19 486:5,8	561:10,20 566:14	675:6,11,17,18	<b>P</b>
552:11	487:13 488:7,11	566:17,24 567:2,6	676:5,21,24 677:5	<b>P</b>
<b>Oral</b>	488:21 489:2,4,21	568:15 570:2	677:10,22 678:15	430:1,1 431:1,1
429:18	490:4,14 491:17	571:4 572:3,12,25	679:4,5 680:5,18	432:5,5 436:2
<b>order</b>	492:17,24 493:3	573:12 576:15,19	681:12,15,18,25	<b>P-S-O-O-Y</b>
465:1 529:2 531:14	493:17 494:21	576:25 577:3,4,13	682:5,10,11	580:21
538:6 630:17	495:14 496:14	578:4,8,16 579:3	683:15,25 684:13	<b>p.m</b>
650:10 696:21	497:23 498:8,20	579:10,15,24	685:17 686:15,23	575:7 582:24,25
<b>organs</b>	501:22 502:8,13	582:14 583:5	687:8,10,18	592:2,3 609:19,20
455:17,25 696:21	503:3 504:4 505:1	584:17 588:3,5,10	690:21,22 693:10	621:24,25 645:22
<b>original</b>	505:5 506:9,13	588:20 594:24	694:14,19,23	645:23 682:20,21
495:6 729:15	507:2,20 509:7,11	597:13,18,24	695:11 698:4,19	727:25
<b>outside</b>	510:8,14,20	600:2,8 602:18	698:25 699:20	<b>pad</b>
599:1 600:6 603:17	512:14,19 513:2,6	603:11,13 604:8	701:18 703:4	585:17
606:8 636:18	513:10,15,21	604:11,22 605:1	706:8,20,23 707:9	<b>pads</b>
<b>ovarian</b>	514:2,12 515:16	606:1,5 608:3	710:16,23 712:22	552:4,12
433:12,15,17,22	516:2,23 517:2,5	610:15,19 611:1	713:1,1,11,16,18	<b>page</b>
434:11,19 437:23	517:8,10,16,18,20	611:10,20,24	714:3 715:22	432:21 435:2
438:5 439:12,20	518:2,6,11,13,16	612:6,16,22 613:3	716:3,5,19,25	439:18 445:23,24
439:22,24 440:3,4	518:21,21 519:2,3	613:6,23 614:7,12	717:3,11,20,25	446:8 448:20
440:6,11,12,15,25	519:4 520:16,19	614:17,21,24	718:4,13,15,23	462:13,20 463:7
441:3,8,11,24	521:11,21,23	615:14,19,24	719:2,12 723:4,20	471:1 477:20
442:3,5,11 444:19	522:1,5,12,16	616:9,23 617:13	723:22 724:24	484:2,22 485:13
444:22 445:16	523:1,14,17,23,24	618:1 623:3 624:2	725:1,19,23 726:2	496:2,3 498:14
446:4,17,21	524:5,13,16	624:3 626:17,24	726:17,25 727:1,3	507:16 524:10
448:25 449:1	525:10,16,19,24	627:14,23,24	727:8,16	538:13 539:4,5
450:7,12,13 451:7	525:25 526:2,6,8	628:2,6 632:8,13	<b>ovaries</b>	544:20 554:9,16



554:17 574:8,13 580:17 585:20 595:16,17 596:3 596:17,25 598:10 614:11 615:3 619:1,2,2,4,5,16 622:3 635:9,11,12 635:18,23 641:8 642:3,4 645:13 647:4 656:4,14 657:3 665:3,8 691:21 692:4 703:10,19,20 711:18 720:13 722:19 725:5,6,8 725:11 726:6,12 730:2 732:3 <b>pages</b> 437:5,15 444:5 445:7 575:23 576:6 610:2 731:4 <b>pain</b> 512:23 555:22,24 556:12 557:3,18 558:5,10 559:9,12 697:12,14 698:21 <b>pain/pressure</b> 512:23 <b>painful</b> 555:16 556:2,4,5 559:19 <b>pancreatic</b> 443:15 445:18,21 445:24 446:23 447:19,25 544:23 545:11,16,23,25 <b>pandemic</b> 589:17 <b>paper</b> 472:7 477:2 480:3 487:15 491:5,11 517:15 541:20 582:18 583:7 641:4 642:15,25 643:8,8 644:24 648:8 663:4,4 664:14,20 665:6	691:12 703:4 704:7,16 <b>papers</b> 480:8 694:1 727:5 <b>paraaortic</b> 595:25 <b>paragraph</b> 538:21 539:3,5 596:5,6 662:4 703:10,24 722:24 725:12 726:13 <b>parent</b> 456:4 622:20 <b>parents</b> 620:20 621:5 622:6 622:14 <b>part</b> 443:21,22 502:1 519:5 538:22 539:7 549:3 552:24 554:21 573:3 582:17 639:16 641:16 649:25 <b>participants</b> 647:5 668:9,23 <b>participated</b> 683:21 <b>particle</b> 594:17 <b>particles</b> 515:2,7,12,24 562:21 563:17 596:16,19,21,23 597:1,9,20 598:3 598:6,7,13,14,18 598:20,24 599:5 599:24,25 600:17 600:21 635:18,20 635:21,22,25 636:2,9,11,13,16 636:21 637:1,4,10 637:13,19,20,25 638:1,9,14,22 639:11 640:14 <b>particular</b> 447:10 515:15	553:24 564:5,19 568:12,13 649:1 677:22 687:25 712:5 714:23 <b>particularly</b> 648:15 <b>parties</b> 728:14 <b>partly</b> 681:21 <b>parts</b> 725:15 <b>partway</b> 496:15 <b>party</b> 728:11 <b>passage</b> 656:7 <b>passed</b> 464:3 573:15 624:12 <b>passes</b> 456:4 <b>patent</b> 554:11,23 682:9 <b>paternal</b> 578:25 579:7 614:2 614:25 616:2 617:21 618:13,15 620:7 626:23 627:17 656:11,15 656:23 657:6,14 657:16,25 658:4 658:12,16,19 659:11 660:5,10 660:19,20 <b>pathologic</b> 448:13 461:25 533:23 <b>pathologically</b> 438:11 <b>pathologist</b> 596:11,12 699:10 <b>pathologists</b> 700:2 <b>pathology</b> 438:9 462:11,23	463:11 509:18 595:12 596:13 601:8,10,22 602:5 634:10 639:5,7,17 699:9 <b>pathways</b> 502:22 <b>patience</b> 722:5 <b>patient</b> 458:4,11 459:9,9 459:14 460:7 465:11,14 466:6 466:12,13,18 503:9 510:2 517:12 524:11 529:10,10 537:18 542:25 553:24 556:13 557:4,22 629:12,14,19 658:17 659:10 660:2,4 686:20 <b>patient's</b> 509:17 511:15,21 552:23 618:6 624:2 658:12 <b>patients</b> 468:12 483:12,15 483:19 484:5,7 505:3 510:1 570:23 596:14 604:25 606:3 612:21 625:16 666:15 669:11 684:9 693:8 696:22 720:5 <b>Pause</b> 726:10 <b>PC</b> 430:2,12 <b>peer-reviewed</b> 723:1 <b>pelvic</b> 512:20,22 556:1,3 595:25 635:5,15 636:4,23 697:12 700:14,22,25	<b>pending</b> 519:24 <b>Penninkilampi</b> 433:18 489:16,20 490:2,5,23 491:15 491:23 <b>Penninkilampi's</b> 489:23 <b>people</b> 455:20 456:24 472:25 516:19 570:20 606:19 626:1 647:16 651:12 <b>percentage</b> 473:18 524:4 534:14,16,17,23 535:7,8,10 537:19 <b>percentages</b> 537:15 <b>perform</b> 511:23 <b>perineal</b> 433:17 490:4 667:20 668:5 722:25 723:4,20 726:18,24 727:11 <b>perineum</b> 553:5 585:9 <b>period</b> 549:7 571:3,22,23 572:1 584:3,5 587:18 631:22 668:13 <b>periods</b> 697:13 <b>peritoneal</b> 554:8 <b>peritoneally</b> 496:12 <b>permission</b> 520:9 <b>personal</b> 586:12 <b>pertinent</b> 445:4 <b>phone</b>
---	--	--	--	---

589:13,18,21,24 591:15 592:6 <b>phosphorus</b> 638:15 <b>phrase</b> 659:9 <b>physical</b> 455:12 <b>physically</b> 586:1 <b>physician</b> 465:11 683:5,19 <b>physician-patient</b> 593:10 <b>physicians</b> 573:9 574:5 586:22 593:20,23 604:23 630:3 676:3,4 683:1,14 <b>physiology</b> 529:11 <b>picked</b> 530:25 <b>PID</b> 544:2,5,6 <b>piece</b> 613:14 <b>pieces</b> 527:1 <b>pin</b> 618:4,10 <b>pits</b> 455:8 <b>place</b> 555:5 615:21 616:2 726:6 728:8 <b>places</b> 615:22,25 722:16 <b>plaintiff</b> 429:10 553:25 578:23 <b>plaintiffs</b> 430:5,10,15 586:6 692:16 702:21 705:22 707:9 708:10 <b>plan</b>	708:6,10 <b>platy</b> 560:23 <b>play</b> 532:25 <b>played</b> 579:14 584:23 600:1 613:22 637:13 638:9 <b>Plaza</b> 430:8 <b>please</b> 448:6 451:13 452:9 529:23 712:18 729:3,8 <b>plots</b> 476:18,20 <b>point</b> 451:1 547:13,14,15 696:8 716:1 <b>pointed</b> 456:13 <b>points</b> 693:7 694:8 <b>polyps</b> 698:3 <b>pooled</b> 483:21 <b>poorly</b> 669:16 <b>population</b> 470:1 472:17 474:12 483:16 545:1 643:16 <b>populations</b> 644:2,3 <b>portion</b> 444:2 445:4 559:1 595:2 <b>position</b> 689:14 690:11 717:6 718:10 <b>positive</b> 498:19 518:5 524:6 542:8 544:11,14 583:12,16 693:9 723:3 724:4	726:23 <b>possibilities</b> 512:2 <b>possibility</b> 499:21 534:6 541:23 542:19 543:2 607:17 612:6 660:14 662:11 671:4,19 672:2,5,15 <b>possible</b> 499:19 511:14 518:10,12 522:3 532:24 547:5 548:4 612:4,10,15 674:8 <b>possibly</b> 498:20 536:20 557:10 607:21,22 <b>posterior</b> 662:7 <b>postmenopausal</b> 582:15 583:6,11,14 583:18 658:2 660:22 <b>postoperative</b> 554:13,25 <b>potassium</b> 638:15 <b>potential</b> 462:9,22 463:20 514:14 542:20 545:3 553:11 587:2 588:3 643:14 659:13 661:6 669:22 670:10 672:23 727:11,13 <b>powder</b> 429:4 433:14,22 434:10 437:16 439:1 477:22 482:7 486:7 488:7 489:4 491:18 492:18,24 496:12 497:23 507:19 509:6 510:7	522:23 528:10 529:3 531:4,10,13 531:17,21,21,25 532:13 533:13 538:24 539:12 546:17 547:1,17 547:20 548:8,11 548:13,18,24 549:2,8,12,13,15 550:6,21,23 551:3 551:5,11,17,21 552:3,17 553:12 553:16 554:12,24 560:7,22 565:9 567:14 568:14,18 569:12,15,17 572:23 576:10,14 576:18 578:17 579:25 584:16,23 584:25 585:9,15 585:22 586:7,22 588:4,9,10 589:6 589:9 594:23 599:12 604:9,10 604:14 610:15 611:5 631:17 632:7,13 633:11 634:6 640:3,6,13 640:23 643:20,23 643:25 644:10,18 645:3,9 646:5 648:10 649:14 650:20,22 651:4 651:22 652:19,24 653:8,19,20 654:7 654:13,15 665:10 666:6 674:9 682:2 682:4 686:4,11,14 686:22,24 690:21 694:19,22 699:19 700:10,12 701:3,6 701:16,22 702:7,9 706:18 707:8 710:17,24 712:21 712:25 713:10,15 713:22 715:21 716:2,6,18,25	717:10,25 718:5 719:10 <b>powder's</b> 651:10 <b>powder-related</b> 540:23 <b>powders</b> 567:21 665:14 <b>power</b> 720:4 <b>powered</b> 719:23 <b>PPF</b> 510:11,12 514:21 <b>practice</b> 696:13 <b>practiced</b> 470:20 513:24 <b>PRACTICES</b> 429:5 <b>practitioner</b> 662:15,19 <b>pre-</b> 583:17 <b>precancer</b> 446:12 <b>precise</b> 551:20 716:13 <b>predisposition</b> 442:1 447:5 <b>predominantly</b> 644:1 <b>premenopausal</b> 440:16 583:9,13 627:16,16 658:2 660:21 <b>preparation</b> 506:25 <b>prepared</b> 436:18 609:23 <b>present</b> 704:12 <b>presented</b> 707:12,17 722:2 <b>pressure</b> 512:20 <b>presumed</b>
--	--	---	---	--

465:20,24 467:10 632:20 <b>pretty</b> 543:5 690:4 <b>prevalence</b> 644:18 645:2 <b>prevalent</b> 650:20 <b>prevented</b> 517:17 <b>previous</b> 498:11,12 572:11 668:11,13 698:6 <b>previously</b> 435:1 436:6 583:22 <b>print</b> 689:10 <b>prior</b> 438:10 573:3,6 634:3 728:4 <b>privileged</b> 590:1,11 <b>probability</b> 522:4 <b>probably</b> 470:3 473:20 487:10 494:10,22 496:18,23 499:15 594:1 641:22,23 <b>problem</b> 445:24 <b>PROCEEDINGS</b> 432:6 <b>process</b> 510:3 555:16 557:15 <b>produced</b> 444:6 <b>product</b> 569:1 <b>products</b> 429:4,5 727:13 <b>professional</b> 429:20 545:13 728:2,19 <b>professionals</b> 502:5,6	<b>profile</b> 578:23 606:1 <b>prognosis</b> 606:25 607:15,22 <b>progress</b> 444:3 <b>project</b> 543:22 <b>promise</b> 533:10 <b>pronounce</b> 703:3 <b>proof</b> 469:1 <b>properties</b> 554:7 665:9 <b>prophylactic</b> 460:23 <b>proportionate</b> 536:1 <b>propounded</b> 731:6 <b>protective</b> 509:16 510:15 533:16 542:12 670:20 <b>prove</b> 466:11 487:24 <b>proved</b> 465:15 <b>proven</b> 472:13 582:5 <b>provide</b> 576:4 620:6 634:15 <b>provided</b> 574:23 616:24 721:3 <b>provides</b> 510:18 <b>Psooy</b> 580:19 <b>PTCH</b> 453:9 <b>PTCH1</b> 448:15 453:1,6 457:5,20,22 459:4 459:10 460:13	461:9 <b>Public</b> 429:22 728:4,21 731:20 <b>publication</b> 484:19 546:21 646:3 <b>publications</b> 690:2,5,12,17,20 <b>published</b> 493:24 510:17 692:20 <b>PubMed</b> 690:11 <b>pull</b> 481:18 516:9,10,13 582:12 691:18 703:15 705:11 <b>pulled</b> 690:6 <b>pulls</b> 516:14 <b>purchased</b> 587:16 <b>purpose</b> 589:23 <b>pursuant</b> 728:10 <b>put</b> 468:5 521:11 552:2 552:4,4,8 585:16 627:2 628:2 631:8 631:15 658:17 673:13 690:13 701:18 <b>puts</b> 628:11 <b>putting</b> 467:8 552:11,12 677:17,19 <b>Pye</b> 656:15,25 657:4	632:20 <b>quantify</b> 632:16 <b>question</b> 447:21,23 448:4,9 449:18,19 450:4 457:9,12,23 459:6 468:8 473:16 474:15 475:12 481:13,16 485:6 494:18 495:20 496:11 499:24 500:13,15 502:1 503:17,20 507:10 507:18 519:17,19 519:23 520:4 521:2 527:20 533:5,22 534:12 534:22,25 540:13 542:15 548:21 557:24 560:13 563:20 570:12 571:8,13 580:16 582:9 583:3,24 584:15 591:10 592:23 601:14 612:12 616:17,19 619:7,11,17,22 620:4,5,18 623:23 639:15 656:13 659:8 664:3 670:24,25 675:17 677:3,16 679:1 680:12,15 686:19 700:11 701:12 705:12 706:5 716:13 717:19 718:10 719:18 720:20 724:22 <b>questioning</b> 450:1 <b>questions</b> 436:15 481:6,7,8 481:13 484:9 511:7,11 553:7 575:1 587:6 588:12 609:1	621:11 661:8 669:17 682:18 683:8 688:5 691:1 691:10 694:12 695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5 <b>quick</b> 726:7 <b>quite</b> 508:13,15 513:10 600:7 611:25 613:25 697:18 703:2 <b>quote</b> 462:20,23 463:3 507:9
<hr/>				
<b>R</b>				
<hr/>				
<b>R</b>				
430:1 431:1 432:5 436:2 <b>race</b> 650:23 <b>raise</b> 627:5 <b>raises</b> 457:23 <b>range</b> 647:19 <b>rank</b> 535:12 <b>rare</b> 455:14 499:17 506:14 540:7 581:5 674:2 <b>rarer</b> 499:1 501:15 <b>rarity</b> 499:5,9,14 501:10 539:18 540:11 <b>rate</b> 652:18 653:9 <b>ratio</b> 471:12 475:3,14				

648:22 654:2	714:10,15 729:5	629:5 645:21	<b>referenced</b>	594:17 718:15
<b>ratios</b>	730:4,6,8,10,12	658:25 659:4	600:14 638:19	<b>relationship</b>
704:18	730:14,16,18,20	661:12,16 662:3	<b>references</b>	439:23 451:2 499:1
<b>RDR</b>	730:22,24	664:24	726:25	501:15 593:10
728:18	<b>reasonable</b>	<b>Record(s)</b>	<b>referred</b>	621:7 645:8 646:4
<b>reach</b>	708:1	433:3,6 434:4,15	642:12,19,24 724:2	648:9 649:13
710:16,22	<b>reasons</b>	444:8 445:9 615:6	725:24 727:2	659:21 712:21
<b>reached</b>	594:25 601:25	661:21	<b>referring</b>	725:22
534:11	639:18 669:11,13	<b>records</b>	502:15,18 566:16	<b>relative</b>
<b>reaction</b>	669:13	440:22 444:3,5	598:15 641:21	440:11,14,15,18
531:20 552:24	<b>REATH</b>	445:6 455:10	720:12 723:19	441:10 471:12
554:14 555:5,8,9	431:2	465:16 467:22	<b>refers</b>	472:6 475:24
555:19 558:14,17	<b>recall</b>	510:11 514:18	503:12	476:23 477:16
559:4,9	454:6 476:13 507:6	574:15,19,22	<b>refined</b>	538:25 539:17
<b>reactions</b>	566:6 585:16	586:17,20 588:8	543:18	541:24 579:8
552:23 555:1	621:17 662:24	593:5 600:14	<b>reflected</b>	613:10 627:14,18
<b>read</b>	663:3 693:15	602:20,24 603:6,9	603:6	627:21 646:23,25
485:23,25 495:18	719:25	603:22 614:1,20	<b>refresh</b>	647:11 660:1,6,12
524:23 558:23	<b>receipt</b>	615:4 616:7,15,21	443:24 620:6 657:5	728:13,14
559:2 646:12	729:16	617:11,15,16,17	<b>regard</b>	<b>relatively</b>
656:7 691:22	<b>receive</b>	617:24 618:11	437:2	607:6 608:19 623:1
703:9 723:14	606:23	621:15 628:17	<b>regarding</b>	<b>relatives</b>
729:3 731:4	<b>received</b>	630:2 631:12,13	436:19 498:7 542:3	659:24
<b>readback</b>	628:19	638:19 670:18	593:21 637:7	<b>release</b>
559:5	<b>recess</b>	681:6	645:8 646:4 648:9	560:5
<b>reading</b>	508:19 575:6	<b>rectum</b>	649:13 692:20	<b>released</b>
453:11 507:15	582:22,24 592:2	662:17	694:6,13 703:4	559:23
524:25 620:15	609:19 621:24	<b>recur</b>	708:5,9	<b>relevant</b>
649:16 663:20	645:22 682:20	607:24 608:5,7,8	<b>regardless</b>	446:20 591:5 634:1
703:17,18 722:23	<b>recognizable</b>	608:13,18	474:19 600:10	<b>reliable</b>
<b>ready</b>	676:21	<b>recurred</b>	<b>regards</b>	464:14 702:13
575:9	<b>recognized</b>	603:14	722:24	<b>relied</b>
<b>real</b>	681:16 698:7	<b>recurrence</b>	<b>Registered</b>	593:3 633:3
726:7	<b>recollection</b>	603:1,19 607:14	429:21 728:3,19	<b>relies</b>
<b>realize</b>	443:25 591:19	<b>recurs</b>	<b>reject</b>	591:1
642:6	592:16 600:18	607:24	467:3	<b>relooking</b>
<b>really</b>	603:3 614:1,23	<b>Red</b>	<b>related</b>	437:24
475:9 516:23 517:4	620:6 657:5 720:2	429:18	448:24 450:6,11,13	<b>rely</b>
545:8 604:18	<b>recommend</b>	<b>reduce</b>	457:21 578:13	465:13 468:12
716:13	460:18,22 461:3	633:18,20	579:10 627:1	486:6 595:11
<b>Realtime</b>	669:10 670:3	<b>refer</b>	670:12 710:17,23	628:23 634:9
429:21 728:3,20	<b>record</b>	503:13	725:17	641:6
<b>reason</b>	445:3 466:7 480:17	<b>reference</b>	<b>relates</b>	<b>relying</b>
451:8 483:17	482:4 508:18	473:16 554:15	495:14 546:18	488:4 590:6 592:18
499:15 519:6	559:2 575:5 583:3	595:12 625:2	567:9 591:20	721:6,20
564:23 566:10	592:1 603:18	626:8,23 642:7	648:25	<b>remain</b>
629:7 655:8	615:10,24 628:5	657:2	<b>relating</b>	581:21

<b>remember</b> 443:6 452:21 467:23 550:16 566:6,25 582:18 589:21 614:4 625:5 661:14,15 666:10 667:2 670:25 681:10 684:18 693:17,19 693:21 694:12 695:18 696:5 697:22 703:7 711:5	628:22,25 631:8 631:15 634:9,10 634:16,21,24 636:8 638:20 639:25 640:9 641:8,16 642:7,12 651:2 695:16,23 695:23,24 699:13 708:6,11 711:14 713:8 719:19 720:9,13	685:16 686:23 <b>requirement</b> 515:9 <b>residents</b> 683:4 <b>respect</b> 476:14 484:13 491:16 522:22 583:24 586:6 617:5 650:3,4 683:19 709:6 717:20 <b>response</b> 558:7 600:24 601:1 601:6,10 612:14 639:11 664:8 684:20 <b>responses</b> 666:4 <b>responsible</b> 537:10,12,13 <b>responsive</b> 449:9,21 457:10 <b>rest</b> 515:17 545:1 <b>result</b> 474:22 498:10 532:9 552:16 557:4 626:6 <b>resulted</b> 578:15 684:12 <b>results</b> 471:2,5 474:15,16 484:1,4 485:16,17 490:11,22 491:4 491:11 498:18 530:15 628:24 644:17,23,24,25 645:15 646:11,12 648:14 667:18 668:8,17 <b>résumé</b> 689:25 <b>return</b> 729:14 <b>review</b> 444:17 452:18	473:21 476:8 482:21 501:4 509:18,21 510:10 510:13 514:22 533:15 588:7 620:12 638:25 645:19 682:7 692:9 699:23 708:10 711:22 712:19 <b>reviewed</b> 478:16 506:23 510:17,24 561:9 574:11 594:16 603:23 617:17 640:2 670:17 685:5 699:9 702:4 702:8 720:25 721:19 <b>reviewing</b> 475:22 510:9,25 523:5 542:6 584:21 618:11 681:6 708:14 <b>rheumatoid</b> 555:24 <b>right</b> 436:20,24 437:3,11 437:19,23 438:23 439:12,22 440:21 441:4,21 442:15 443:7,9 448:2,10 450:23 452:6 453:2 455:15 456:5,9 459:4 461:7,23 462:5,14 463:19 464:11 465:23 466:5,23 470:24 471:7,19 473:14,25 475:6 477:15 481:22 482:1 484:17,21 486:1 487:5 492:13 494:1 498:22 501:19 503:23 504:12 505:19 507:21	508:10 511:8,25 512:21 513:6,22 514:2,15 516:1,6 517:6 519:11 522:18 524:1,17 525:14,17 526:1 526:20 532:19 533:9 538:16 539:10 545:2,5 547:5 549:9 550:17,24 552:19 553:17 555:19 556:2,17 557:12 558:14 563:12 567:15 571:5 572:22 573:13 574:11,13,16,23 575:14,21 576:1 576:11 578:12 586:17,23 589:7 589:12 591:18 594:5 595:14,21 595:24,24 596:2 596:11,15,21 597:5,11,12 598:10 602:9,12 602:14 603:5,11 608:13,25 609:4 609:13,24 610:6 613:7 614:14 615:11,16 618:3 618:12 622:7,17 622:22 623:16 624:16 626:5,6 630:19 633:6,13 634:3,11,25 635:4 635:5,5,6,7,13,15 635:22 636:4,5 641:4,8 642:16 643:10,16 644:6 644:22 645:11 648:6,22 652:8 653:1 656:13,21 658:11 660:5 661:2 662:5,14,20 663:10 666:2 667:15 668:5,25
<b>removal</b> 696:20 <b>removed</b> 515:20 587:19 607:8 <b>reoccurrence</b> 602:17 607:17 <b>repeat</b> 451:13 674:19 <b>replacement</b> 521:8,16 522:25 523:11 532:15 680:1 <b>report</b> 434:2,8 436:19 437:1,6,7,15 438:9 439:17 448:17,20 462:11 462:14,21,24 463:5,12 476:19 477:20 492:13 514:25 515:5,6 523:21 524:10,23 554:6,9,16 562:22 563:17 567:20 574:8 575:19,24 575:25 576:6 580:17 594:16 595:4,8,11,12 596:4 598:3 600:15 602:20 603:7 609:23 610:3,4,11 614:10 624:18 625:24	<b>reported</b> 464:4,8 475:3 480:3,4 482:18 584:7 585:11 615:1 617:19 618:12 632:1 646:22 662:14 668:23 699:8 <b>reporter</b> 429:21,21,21 497:7 728:3,3,3,19,20 728:20 <b>Reporters</b> 429:20 728:2,19 <b>reporting</b> 482:15 483:5,7 <b>reports</b> 596:20,22 610:2 697:20 702:17 705:7 707:23 708:14 711:19 721:1,11 <b>representative</b> 702:22 <b>reproductive</b> 581:18 582:2 665:17 682:10 <b>request</b> 573:25 628:13 <b>requested</b> 582:22 631:12 706:11 728:11 <b>require</b> 529:17 531:13 <b>required</b> 532:3 640:7,8			



671:3 677:16	514:19 518:20	679:15,20,21,21	436:2	498:23 501:17
678:16 679:18	519:2,3,5 520:16	679:23 680:2,16	<b>Saavalainen</b>	525:3 549:12
682:16 683:22	520:18,18 521:10	680:17,22,24	470:19 703:4,13	585:19 598:2
684:2 685:9 688:4	521:21 522:16,17	681:7,8,16,17	709:8	615:21,25 658:3
688:17,22 689:8	523:13 524:5,12	684:19,23,25	<b>Saed's</b>	704:12 712:11
689:12,15 690:25	524:16 525:9,16	685:3,6,12,14,22	706:6	713:14 714:6
703:21 704:18,25	525:19,20,21,23	688:1 690:22	<b>SALES</b>	715:1,6,7,9,10,11
711:13,17 712:8	527:15 528:7,17	698:3,7,16,19,25	429:5	716:1,4
714:6,9,12 715:19	529:12,18 530:15	703:5 704:13	<b>saliva</b>	<b>scarring</b>
716:12 720:6,16	530:16 531:6,14	711:14 712:25	624:20,23 625:6,16	696:25
720:18 723:13,13	531:23 533:15,18	716:16 717:8,22	625:18,22 626:1,4	<b>Schildkraut</b>
727:19	535:25 536:17	725:19	626:10 631:9	478:7,25 488:15
<b>right-hand</b>	537:4,9,15,20	<b>risks</b>	<b>salpingo-oophor...</b>	640:17,18 641:3
485:14	538:24,25 539:13	542:12 671:12	460:24	641:20 642:24
<b>Rigler's</b>	539:17,18 540:5,8	<b>risky</b>	<b>sample</b>	643:6,9,13 646:2
567:20	540:10 541:24	697:1	712:2	648:8
<b>rings</b>	542:20 543:1,3,4	<b>River</b>	<b>samples</b>	<b>school</b>
711:7	543:10,13,17,21	429:19	568:7 589:5,9	452:22
<b>rise</b>	543:23 544:2,6	<b>robustness</b>	599:19	<b>SCHRAMM</b>
523:12	545:4 576:19	725:18	<b>SARA</b>	430:12
<b>risk</b>	577:12,15,17,21	<b>role</b>	430:12	<b>science</b>
433:14 434:10,18	577:23,24 578:3,9	537:4 579:14	<b>satiety</b>	451:6,17 502:6
438:17,22 439:4,8	578:10 579:3,10	584:23 600:1	512:23	504:13 516:22
439:25 440:5,12	580:4 607:13	613:22 637:13	<b>saw</b>	524:4 547:8 553:1
440:25 441:3,8,15	608:2,18,18 611:3	638:8	563:18 571:2	559:17,18
441:20,21 446:21	612:1 613:8,10,16	<b>Rosenblatt</b>	587:14 603:18	<b>scientific</b>
447:24 449:1	618:5 624:1 627:9	492:22	626:8 630:2	708:2 721:9
451:2,7,19,24	627:23 628:3,11	<b>round</b>	640:14 699:8,12	<b>scientist</b>
454:13,22,25	632:25 633:20	474:5	700:3	545:12
459:12,14,19	637:22 640:23	<b>route</b>	<b>saying</b>	<b>SDHA</b>
460:12,15 461:5	643:20 644:1	548:13 579:19	449:21 463:22,23	448:13,25
461:13,14 462:4,6	646:23,25 647:11	580:8,10,13	466:12,13 472:11	<b>search</b>
462:9,17,22	647:22 648:16,17	631:16 726:18	475:9 495:2	512:5 690:11
463:20 469:16,19	648:22 649:8	<b>routine</b>	505:22 520:4	<b>second</b>
469:24,25 470:13	650:23 652:21,25	585:21	560:15 576:15,17	445:2,24 454:24
470:21 471:7,9,12	653:19 654:1,16	<b>routinely</b>	576:23 577:2	474:2 596:5,6
471:18,24 472:1,6	655:2 657:22	596:13	601:2 629:20	641:15 645:21
473:1,17 474:20	658:18 659:13,14	<b>rule</b>	644:15 652:15	662:4 692:15
474:24,25 475:3,7	660:15 661:6	469:12 540:24	673:8 712:24	703:10,19
475:19,24 476:3	666:12,20 667:1,6	541:13,22 542:19	716:7	<b>secrete</b>
476:23 477:16	667:14,23 668:3	728:11	<b>says</b>	560:1
478:10,14,18	668:20 669:3,12	<b>ruled</b>	444:18 452:24	<b>section</b>
479:12 482:7	669:16,22 670:11	566:21	453:17,22 454:1	645:13 698:6,13,16
485:18 490:24	670:18,19,21		454:12,24 455:3,6	698:18
496:13 509:15	671:25 674:15		456:20 462:16	<b>see</b>
510:14 511:20	676:22,23 677:11	<b>S</b>	463:5,23 477:21	443:21 445:20,20
512:11,16 514:14	678:3,12 679:9,11	430:1 431:1 432:5	491:4 497:5	448:16,18 449:25

450:22,25 451:24 452:20 465:3 468:14 473:19,22 474:12 477:2,24 480:8 481:2,5,10 483:12,13 484:3 489:23 491:10 496:10 499:16 506:25 512:11,12 540:17 546:11 562:22 563:13 586:19,24 587:20 595:16,18 596:18 598:11 600:7 601:4,18,20,21,24 602:2 606:4 615:15 619:4 621:14 628:21,24 630:18 639:1,10 639:14,16,20 647:13 653:22 659:7 662:2,13,18 664:14 665:11,18 665:19 667:25 668:1 681:6,7 687:9,16,19 689:3 689:4 698:14 699:24 700:1,4 716:15	<b>sent</b> 696:23 <b>sentence</b> 454:25 455:3,6 485:24 491:3 498:23 539:10 596:5 665:8 712:11 725:12 727:10 <b>separate</b> 478:22 492:11 506:18 556:20 577:16 715:20 727:7 <b>separated</b> 478:5 491:25 508:4 583:8,20 598:21 646:17 647:6 715:14 <b>separately</b> 478:23 492:19 558:11 705:19 713:5,23 714:11 714:16 719:15 <b>separates</b> 490:14 <b>separating</b> 716:8 <b>September</b> 429:16 432:3 436:3 728:23 <b>series</b> 511:7 517:9,20 587:5 696:5 <b>serous</b> 490:24 498:20 502:16,16 503:1 503:10,10 504:1,8 504:10,18,20 505:11,13 569:21 570:3,3 606:3,11 646:18 647:7,10 648:18 693:12 <b>SERVICES</b> 429:24 <b>serving</b> 594:7,12	<b>set</b> 576:5 610:10 614:10 641:3 728:9 <b>severe</b> 554:13,25 <b>shake</b> 632:22 <b>Shank</b> 444:4 464:9 465:24 467:14,21,23 <b>shaped</b> 662:9 <b>sheet</b> 729:6,9,12,15 731:7 <b>short</b> 587:18 646:1 <b>shorter</b> 575:4 <b>shouting</b> 530:2 <b>show</b> 443:20 463:3,4 478:13,23 486:21 487:15 489:9,13 494:15 495:10 497:19 506:15 515:23 542:8 544:13 578:22 601:8 639:5,6 645:16 655:21 661:12 712:18 <b>showed</b> 453:5,12 454:9 465:15 544:11 582:13 583:4 668:19 697:23 698:11 706:7 <b>shower</b> 549:13,13 585:24 <b>showered</b> 586:2 <b>showing</b> 716:8 <b>shown</b> 454:5 560:22 722:3	<b>shows</b> 478:17 479:11 488:5 489:3,20 664:15 <b>siblings</b> 619:8 <b>sic</b> 662:24 <b>side</b> 481:5,5,10,11 485:14 538:21 579:9 620:15,15 620:22,23 656:19 658:23 659:19,20 660:18 662:5 <b>sign</b> 639:21 697:17 729:8 <b>signature</b> 728:11 <b>significance</b> 448:14 449:2 450:19 453:9 457:5 479:4,8 489:14 491:8 494:11,23 496:19 496:24 <b>significant</b> 438:3 441:18,22 442:16 443:10 446:14 478:14,17 478:24 479:12 487:16 488:6,12 488:17 489:3 495:11 506:16 544:15 546:12 582:14 583:5,19 640:12 647:14 648:1,4,20 649:9 649:21 652:6 668:3 684:16 723:3 724:3 726:23 <b>significantly</b> 457:1 <b>signing</b> 729:10	<b>signs</b> 455:6 512:18 513:3 697:10 <b>silent</b> 556:12 <b>silent-type</b> 556:11 <b>silicate</b> 598:6,18 599:9 <b>silicon</b> 598:9,20 599:13 637:4 <b>similar</b> 510:2 528:13 568:1 632:10 650:23 653:21 <b>similarly</b> 474:23 535:20 559:11 630:14 <b>simple</b> 513:11 <b>Simultaneous</b> 550:13 676:16 <b>single</b> 506:6 <b>Sister</b> 666:21 <b>sit</b> 570:24 <b>site</b> 559:14 <b>sits</b> 648:23 <b>situation</b> 484:25 <b>sizes</b> 712:2 <b>skin</b> 453:18 454:14 455:8 456:19 586:15 <b>slide</b> 601:10,22 639:17 <b>slides</b> 639:7 <b>slightly</b> 539:25 569:9
--	---	---	--	---

577:15 606:9	<b>source</b>	447:4 604:2,4,8,16	<b>stated</b>	<b>stenographically</b>
<b>small</b>	464:14 483:9	604:18 605:14,18	437:15 508:3 515:6	728:8
455:8 493:2,5,21	<b>South</b>	605:19 678:16,20	601:25 701:20	<b>step</b>
494:9,21 495:1,9	430:18	<b>sports</b>	<b>statement</b>	542:5 547:21
496:17,23 515:20	<b>soy</b>	586:2	452:10 499:11	<b>stop</b>
583:20 595:2	698:24	<b>sschramm@bbg...</b>	503:12 525:7	438:19 461:18
605:13	<b>space</b>	430:13	539:24 540:14	474:2 519:25
<b>smoker</b>	729:6	<b>ST</b>	541:4 605:7 648:7	621:11 662:20
447:11	<b>speak</b>	429:8	649:20 650:1	<b>Street</b>
<b>smokers</b>	473:6 574:1	<b>stable</b>	651:8 675:25	429:19 430:3,18
545:21	<b>speaking</b>	543:5	696:11,13 704:8	431:4
<b>smoking</b>	473:7,10,15 530:8	<b>stack</b>	710:3 717:9,21	<b>strengths</b>
447:10,24 505:17	724:8	470:9 538:9	718:3,14 719:8	695:15 696:1,4
505:22 506:5	<b>specific</b>	<b>stage</b>	723:22	<b>stress</b>
534:3 544:25	503:21 508:23	603:16 606:13,14	<b>states</b>	560:2
545:17,20,23	509:3,5 510:19	606:22 607:6	429:1 473:11	<b>strike</b>
546:3	514:12 540:22	608:19	485:18 487:19	440:9 449:4,20
<b>socially</b>	541:10 542:2	<b>stand</b>	599:8 615:14	455:22 457:7
594:1	553:7 560:18	707:22	622:15 712:20	527:12 543:11
<b>sodium</b>	582:19 588:17	<b>standard</b>	716:17	548:19 567:10
638:15	617:11 675:11,19	465:2 469:13	<b>stating</b>	580:6 587:22
<b>somebody</b>	677:5 685:14	703:10,25 704:2	629:4	594:15 611:8
459:2 469:7 473:3	715:15	<b>standpoint</b>	<b>statistical</b>	625:12 659:24
551:1,5 615:1,24	<b>specifically</b>	488:5	478:13,24 479:3,8	<b>stromal</b>
617:25	444:3 454:1,12	<b>starch-based</b>	487:16 489:14	497:5 701:24
<b>somewhat</b>	471:4 475:25	554:12,24	491:7 494:10,23	<b>strong</b>
543:18 648:13	520:17 542:11,16	<b>start</b>	496:19,24 506:16	554:14 555:1,4
<b>sophisticated</b>	544:4 552:13,22	520:13 691:10,22	649:21	558:13
626:3	555:14 565:4	705:14 722:16	<b>statistically</b>	<b>studies</b>
<b>sorry</b>	566:20 572:18	724:20	478:17 479:12	477:23 478:1,4,12
477:3 482:24 539:4	578:8 596:4	<b>started</b>	488:6,12 489:3	478:22 479:6,16
558:23,24 641:14	643:22 647:8	551:2	495:11 544:14	483:22 488:13,23
642:6 657:8 661:1	649:6 655:7 669:7	<b>starting</b>	546:12 583:18	488:25 489:8
680:12 700:23	684:8 693:12	483:19 496:16	647:1,14,25 648:3	490:15 491:10,13
701:11 703:11	713:8	619:17	648:19 649:9	491:24 492:23
705:14 723:9,9	<b>specifics</b>	<b>starts</b>	652:6 668:3	493:8,16,24
726:9	585:13 633:10	498:17 570:15,17	693:14 723:2	495:10 499:25
<b>sort</b>	<b>specimen</b>	570:19	724:3 726:23	506:17 541:25
511:3 613:9,13	602:6	<b>state</b>	<b>stay</b>	544:10 553:6
<b>Sotto</b>	<b>spelled</b>	429:8 490:23 499:7	664:1	632:6 643:25
620:12	452:21	499:8 501:14	<b>stenographer</b>	644:13,15 666:22
<b>sound</b>	<b>spoken</b>	508:2 523:21	487:2 550:14	669:7 706:6
477:15	573:20 574:4	524:11 538:20	582:23 664:23	711:22,25 713:16
<b>sounded</b>	593:14,16,19,23	539:16 643:23	676:17 706:12	714:17 715:13
724:10	682:24,25 683:11	644:5,8,18 649:12	711:7	717:2,17 718:6,19
<b>sounds</b>	683:13	665:12 693:2	<b>stenographic</b>	723:1,6 724:2,23
536:9 607:14	<b>sporadic</b>	728:22 729:5	480:16	725:14 726:22

<b>study</b> 470:21 473:20,22 474:4,20 478:8,11 478:15,25 479:5 479:11,13,19 480:5,18,19,24 481:14 482:11,19 483:12,16,16,21 484:7 486:2 487:25 488:2,3,4 488:10,10,15 489:12,18,24 490:20 491:22,23 495:13 498:11,13 499:6 500:10,23 501:4,10,12 506:15 543:9 582:6 641:21 645:6 647:22 649:16 651:18 652:1,2 655:10 666:22 668:2,7,18 668:18 669:9,14 669:17,24 670:4 692:21 693:8 694:6 703:12 704:13 705:3,10 705:13,15 706:5 706:10 709:8,13 709:25 710:1,14 710:15 715:16 720:5,11	731:15 <b>subsequent</b> 667:20,23 <b>subsidiary</b> 554:19 <b>substance</b> 731:6 <b>substances</b> 559:22,22 560:1 561:13 <b>substantial</b> 437:17 439:1 442:12 510:7 517:25 706:18 <b>substantiate</b> 492:4 <b>subsumed</b> 718:14 <b>subtle</b> 556:22 <b>subtype</b> 477:21 489:2 493:9 <b>subtypes</b> 478:5,9 491:1 494:9,20 496:17 496:22 498:8 499:17 501:16,22 502:8,13,15,23 503:8,14 504:15 504:21,25 505:5 506:18 566:25 570:2 694:13 710:25 711:16,20 712:6,16 714:1,1 714:5,7,19,24,25 715:14,17 716:9 716:11 717:2,18 718:7,19 719:11 723:21 724:4,25 725:25 726:3 727:3,7,16 <b>sufficient</b> 528:14 529:15 531:4,10 550:5,24 551:16,22 552:15 584:19 640:13 682:1,9 701:2	<b>sufficiently</b> 719:22 <b>sugars</b> 664:11 <b>suggest</b> 455:12 672:19 <b>suggested</b> 629:19 <b>suggesting</b> 591:3 627:6 <b>suggestion</b> 629:14 <b>suggests</b> 447:4 672:12 <b>Suite</b> 430:9,14 431:4 <b>summary</b> 439:6 547:9 <b>supplement</b> 482:4 698:24 <b>supplemental</b> 692:6 <b>supplemented</b> 721:10 <b>support</b> 432:21 478:1 486:6 486:19,21 515:8 541:7 570:22 584:16 627:25 632:5 642:20 650:7 659:18 672:20 <b>supported</b> 515:18 550:8 584:10 585:5 632:24 <b>supportive</b> 640:6 659:12 <b>supports</b> 527:9 553:2 <b>supposed</b> 653:15 <b>sure</b> 437:25 439:9 451:15 469:20 489:25 495:24 502:3 521:1 533:7	536:6 541:12 544:20 554:18 582:4 614:8 617:20 621:23 623:6 626:25 641:20 642:2 645:18 653:14 657:1 661:17 673:4 700:18 <b>surgeon</b> 593:24 699:7,25 <b>surgeries</b> 440:3 696:25 <b>surgery</b> 438:13 461:3 464:19,20,25 465:3,9 469:12 607:7 630:11 699:6,10 704:3 709:21 710:11 <b>surgical</b> 460:20 462:1 465:19 466:6,11 466:15,24 467:3 467:18 469:1 558:12,13 596:10 596:12,13 628:21 629:23,23 630:24 631:3 666:3,7 696:20 704:14,21 705:8 709:11,15 710:4 <b>surgically</b> 470:23 629:23 630:9 704:17 <b>survivors</b> 572:6 <b>susceptible</b> 545:16 655:12 <b>suspect</b> 629:7 <b>suspected</b> 543:18 <b>suspicion</b> 581:20 <b>Swann</b> 429:9 434:9 609:1	609:6,8,13,16,23 610:3,10 611:9,14 612:20 613:2 614:6,21 616:22 618:12 620:7 621:7 623:7,11,17 623:19 624:15 626:15 627:10 628:6,8 631:21 633:3,10,15 634:21 637:8 640:12 646:19 647:20 648:15,23 648:25 649:6 650:16 661:9 662:14 683:9,19 684:11 <b>Swann's</b> 610:15 611:23 613:5,21,24 615:3 616:8 617:13 620:2,15,17,22,22 621:1,15 622:11 622:14,15,25 623:14 627:22 630:14,16 631:17 632:12 633:19 634:14 635:3 636:17 637:13 638:10 640:1,10 656:10,11 657:6 657:14 670:8 671:8 674:8 682:23 683:10,14 <b>SWANNV_ELB...</b> 434:16 661:22 <b>SWANNV_ELB...</b> 434:17 661:23 <b>SWANNV_MB...</b> 434:5 615:7 <b>sworn</b> 436:6 728:5 731:15 <b>symptom</b> 513:1 698:22 <b>symptoms</b> 455:6 465:7 469:7 469:8 511:16
---	--	--	--	--

512:18 513:3,9,14 513:15 555:6,8 556:21,22 558:2,4 697:10 699:5 <b>syndrome</b> 433:10 452:7,12,15 452:23,25 453:10 454:7,11,22 455:13,14,20 456:12,16,18 457:2,13,17 <b>system</b> 581:13,14 582:1 <b>systemic</b> 555:9,18 559:16 560:3	484:20 485:9 487:13 489:22 490:4 493:8 497:23 498:19 499:1 501:15 506:8 507:1 509:10 514:11,14 515:12,15,18,18 515:24 516:12 517:2,17 518:9,10 518:10,13 522:22 523:2,7 528:6,7 528:14,19 529:7 529:15 532:21 533:1 534:14 535:7,18 536:19 536:21 537:10 549:6 552:23 553:2,4 554:7 555:2 556:6,6 558:7,12 560:23 560:23 561:2,3,4 561:12,16,19,19 561:25 562:3 565:13,14,19,20 567:6,24 568:7,22 569:6 576:24 577:3,5 584:2,3 586:16 588:16,18 588:23,24 596:20 596:22,25 597:16 599:21,23 600:16 600:21 605:13 610:18,24 611:2 611:10,14,19,25 612:2,5,15,23 631:21,23 633:19 633:25 636:1,2,9 636:11,19 637:5 637:20 638:21 643:14 651:9 652:4,18 653:25 665:9 666:25 667:6,13,20,21 668:5,10 669:3,19 669:22 670:22 674:16 675:4	682:2,12 684:16 685:13 691:16 693:10 706:8 723:4,20 725:20 726:19,24 727:12 <b>talc-based</b> 569:16 <b>talcum</b> 429:4 437:16 439:1 477:22 486:7 488:7 489:4 491:17 492:17,24 496:12 507:19 509:6 510:7 522:23 528:10 529:3 531:4,10,13 531:17,21,21,25 532:13 533:13 546:17,25 547:19 548:8,11,13,18,24 549:2,8,12 550:6 550:21,22 551:3,5 551:11,16,21 552:3,17 553:12 553:16 560:7,22 565:9 567:13 568:17 572:23 576:9,14,18 578:16 579:25 584:16,23,25 585:9,15 586:6,22 588:4,9,10 589:6 594:23 604:9,10 604:14 610:14 611:4 631:17 632:13 633:11 634:6 640:3,6,13 651:4,10 652:18 652:24 653:8 654:7,13,15 674:9 682:1,3,8 686:4 686:10,14,21,24 690:21 694:19,22 699:18 700:10,11 701:3,6,15,22 702:7,9 706:17 707:8 710:17,23	712:21,25 713:10 713:15,21 715:21 716:2,6,18,25 717:10,24 718:5 719:10 <b>talk</b> 521:4 560:10 565:3 565:7,12,19 599:15 <b>talked</b> 438:20 462:3 495:13 516:24 520:14 527:5 541:8 542:13 543:3,25 544:9 548:20 550:11 551:8 553:10 562:1 569:24 577:18 582:11 584:13 589:1,12 594:25 604:7 606:9 629:11 632:11 639:9 643:5 670:9 679:24 682:13 684:9 700:8 720:9 720:9 <b>talking</b> 460:15 475:3,4 484:24 494:3 499:9 519:1 620:11 642:7 645:3 656:17 <b>Technical</b> 582:22 <b>Teeth</b> 597:23 <b>tell</b> 459:14,23 460:16 481:15 482:13,17 491:22 570:23 685:21 686:2,9 691:21 <b>telling</b> 553:21 615:22 687:17 704:4 <b>tells</b>	631:1 <b>tend</b> 570:16 <b>tenets</b> 510:22 <b>terms</b> 446:21 471:3 475:19 485:6 544:19 552:6 563:20 564:4 585:21 587:1 591:1 592:19 606:2 634:1 657:21 658:9 659:9 660:24 721:20 <b>Terry</b> 433:15 478:11,15 479:5,13,18 480:18,19,22,24 481:4,14,24 482:5 482:8,10,15 483:5 483:16,25 484:1 484:12,15 486:2,3 486:24 488:3,10 488:25 489:12,17 491:15,21 495:13 <b>Terry's</b> 480:3 487:16 <b>test</b> 624:19,20 625:6,7 625:10,14,15,18 625:19,22,23 626:6,10,13 628:14,23,24 629:6 630:16,18 630:19 631:9 <b>tested</b> 441:7 518:4 568:2 672:7 <b>testified</b> 436:7 476:22 477:5 494:7 507:1 516:1 516:5 612:21 656:11 708:16 <b>testify</b> 580:7 728:5
--	--	---	---	--



<b>testifying</b> 610:9 690:15 691:23 720:23	670:5 674:13 684:22 699:22 720:19	613:9 617:10 629:5 641:22 642:13 650:14 656:17,19 663:4 666:7 670:5 671:12 680:9 690:4,15 697:19 700:8 708:16 721:18 722:1 725:11	507:3,24 508:6,25 509:12 510:21 511:17 512:1,7 513:8 514:3,16 515:3 517:7 518:17,24 519:12 519:16 520:1,8,22 521:24 522:7 523:4,16 524:8,19 525:2 526:9,13,21 527:18 528:3 529:4 530:7 532:6 533:2 534:19 536:3 537:17 542:4,23 543:15 546:1,5 547:11 548:9 549:10 552:7 553:18 556:18 557:19 560:20 561:5,11 561:22 562:14,24 563:25 564:7,12 564:20 565:17 567:4,16 568:16 568:23 569:7,23 571:7 572:14 573:1 576:16 577:1 578:5 579:5 579:16 580:12 581:7,19 582:3 584:20 587:4 588:6,21 589:25 590:9,12,20 591:6 591:22 592:20 593:7 597:7,21 598:16 599:7 600:3 601:11 603:12 604:3,13 605:5,15 607:1,18 608:4,14,22 609:5 609:11,17 610:21 614:15 615:20 616:10 617:1,6,14 621:23 623:5 626:21 629:2,16 630:5,20 631:24 632:19 634:4	637:17 638:12 641:10,14,19,25 642:3,5,18,23 643:3 645:14 646:10 648:2 649:4,17 650:5 651:6 652:9 653:2 653:10,16 654:8 654:19,21 655:14 656:6 657:24 659:15 663:2,15 664:4,13 665:22 666:13 668:6 669:5,25 670:14 671:1,7,23 673:1 673:25 674:11,23 675:13,23 676:8 676:12,18 677:7 677:23 678:8,17 679:6,14,19 680:8 680:20 681:20 682:6 684:14 685:18 686:5,12 687:1,7 688:6,9 688:10,15 691:3,8 692:1,10 693:1,16 694:11,24 695:4,9 700:7,20 701:10 702:19 703:1,13 703:18,23 704:1 704:11 705:4 706:3,16 708:23 709:14 710:6,8,21 712:9,23 713:13 715:2,8,23 716:22 717:12 718:17,25 719:13,19 721:14 722:7,14,22 723:9 723:12,16,25 724:10 725:4 726:4,8,11 727:9 727:18,21
<b>testimony</b> 439:7 446:19 469:5 476:10 477:12,13 494:16 495:17,25 496:3 505:6 507:5 507:7,25 526:11 543:10,12,16 571:3 580:9 586:5 588:22 594:21 607:19 633:3,12 656:12 657:9 676:2,10,13,15,19 676:20 683:24 684:3 702:5,9,12 707:7 710:9 721:2 724:7 728:8	<b>things</b> 440:23 469:11 510:13 513:13 522:1,5,11 523:18 529:17 541:3 545:12 556:19,23 558:9,11 560:3 565:20,22 597:22 601:7,20 605:21 605:21 606:6 629:6 630:21 638:16 641:13 643:12 649:5 675:3,5 680:5	<b>third</b> 454:24 575:12 <b>third-degree</b> 579:7 <b>thirty</b> 729:16 <b>Thompson</b> 430:2 432:10,12 441:12 442:8 443:12,17 447:6 448:3,5,8 449:8 449:11,13,17,25 450:5,10,17,24 451:10,21 453:7 453:25 454:8 456:14 457:10,15 457:25 458:12,15 458:22 459:16 460:8,25 462:15 463:2 464:17 465:17 466:1,8 467:7,16,20 469:3 469:18 470:6,10 471:20 475:2,6,8 478:20 479:14 480:6 481:18 483:10 484:23 485:11 486:9,12 486:17 487:14 488:9 489:6 491:19 493:1,10 493:18 494:24 495:16 499:13,22 500:9,14,22 501:13,24 502:10 503:5,19 504:5,16 505:21 506:2,10	637:17 638:12 641:10,14,19,25 642:3,5,18,23 643:3 645:14 646:10 648:2 649:4,17 650:5 651:6 652:9 653:2 653:10,16 654:8 654:19,21 655:14 656:6 657:24 659:15 663:2,15 664:4,13 665:22 666:13 668:6 669:5,25 670:14 671:1,7,23 673:1 673:25 674:11,23 675:13,23 676:8 676:12,18 677:7 677:23 678:8,17 679:6,14,19 680:8 680:20 681:20 682:6 684:14 685:18 686:5,12 687:1,7 688:6,9 688:10,15 691:3,8 692:1,10 693:1,16 694:11,24 695:4,9 700:7,20 701:10 702:19 703:1,13 703:18,23 704:1 704:11 705:4 706:3,16 708:23 709:14 710:6,8,21 712:9,23 713:13 715:2,8,23 716:22 717:12 718:17,25 719:13,19 721:14 722:7,14,22 723:9 723:12,16,25 724:10 725:4 726:4,8,11 727:9 727:18,21	<b>thought</b> 448:17 518:25 539:2 557:24 592:9 642:8 <b>thousand</b>
<b>think</b> 440:25 441:14 445:3 448:19 449:21 471:2 475:11 476:17 478:14 488:24 489:7 494:12 495:1,7,22 500:15 503:20 510:11,23 515:9 518:3,25 520:7 526:6 527:6 533:21 534:1,11 534:22 535:13 537:1,10,14 540:12 541:6 542:24 549:22 551:8,16 555:4,14 557:25 558:1,6,11 564:23 565:2 566:11 567:23 568:20,24 569:8 571:2,12 574:9 577:18 580:3 584:23 586:10 589:25 590:7,10 590:12,15,17,22 591:2,12,22 601:1 601:13 604:21 607:20 608:12,15 609:12 612:22	<b>testing</b> 438:1 441:1 448:12 453:5 460:19 624:16,22 626:2 631:2,5 <b>tests</b> 625:16 626:1 <b>Texas</b> 429:19 728:22 <b>thank</b> 457:19 470:11 481:21 497:10,11 538:4 583:21 634:17 643:2 688:13,14 691:4 722:4 727:23,24 <b>theory</b> 654:17 <b>therapy</b> 521:8,16 522:25 523:11 532:15 606:18 607:9 680:1 <b>thing</b> 447:7 468:1 516:15 523:6 582:6 590:21 600:7 622:22 623:24	<b>third</b> 454:24 575:12 <b>third-degree</b> 579:7 <b>thirty</b> 729:16 <b>Thompson</b> 430:2 432:10,12 441:12 442:8 443:12,17 447:6 448:3,5,8 449:8 449:11,13,17,25 450:5,10,17,24 451:10,21 453:7 453:25 454:8 456:14 457:10,15 457:25 458:12,15 458:22 459:16 460:8,25 462:15 463:2 464:17 465:17 466:1,8 467:7,16,20 469:3 469:18 470:6,10 471:20 475:2,6,8 478:20 479:14 480:6 481:18 483:10 484:23 485:11 486:9,12 486:17 487:14 488:9 489:6 491:19 493:1,10 493:18 494:24 495:16 499:13,22 500:9,14,22 501:13,24 502:10 503:5,19 504:5,16 505:21 506:2,10	637:17 638:12 641:10,14,19,25 642:3,5,18,23 643:3 645:14 646:10 648:2 649:4,17 650:5 651:6 652:9 653:2 653:10,16 654:8 654:19,21 655:14 656:6 657:24 659:15 663:2,15 664:4,13 665:22 666:13 668:6 669:5,25 670:14 671:1,7,23 673:1 673:25 674:11,23 675:13,23 676:8 676:12,18 677:7 677:23 678:8,17 679:6,14,19 680:8 680:20 681:20 682:6 684:14 685:18 686:5,12 687:1,7 688:6,9 688:10,15 691:3,8 692:1,10 693:1,16 694:11,24 695:4,9 700:7,20 701:10 702:19 703:1,13 703:18,23 704:1 704:11 705:4 706:3,16 708:23 709:14 710:6,8,21 712:9,23 713:13 715:2,8,23 716:22 717:12 718:17,25 719:13,19 721:14 722:7,14,22 723:9 723:12,16,25 724:10 725:4 726:4,8,11 727:9 727:18,21	<b>thought</b> 448:17 518:25 539:2 557:24 592:9 642:8 <b>thousand</b>

472:24	599:19 600:22	<b>training</b>	<b>true</b>	701:23,24
<b>thousands</b>	634:13 635:2,18	690:1 696:15	443:11 457:14	<b>twice</b>
584:8 585:4	638:1 640:15	<b>transcript</b>	472:12,17,18	469:25 470:1 476:4
<b>three</b>	682:3	728:7 729:17,18	499:4,20 500:20	586:2,3 594:2
490:15 491:10,13	<b>tissues</b>	<b>transcription</b>	501:9 519:9 528:4	632:2 633:8
491:24 549:19,24	455:18 456:1 636:3	731:5	534:8 539:20	<b>two</b>
597:4 719:11	638:2,5	<b>transformation</b>	542:10 653:4	440:23,24 441:3,8
<b>throat</b>	<b>title</b>	706:7	654:25 702:20	529:8 556:19
443:2 445:15	667:3	<b>translate</b>	<b>truth</b>	558:11 570:21
446:25 447:9,17	<b>titled</b>	538:25	553:21 728:5,5,6	575:1 627:15
<b>tied</b>	667:13	<b>translates</b>	<b>truthful</b>	629:6 630:21
549:21 551:2	<b>today</b>	539:17	467:4	633:5 636:2,8,11
572:19 573:4	492:8 535:2 612:21	<b>trapped</b>	<b>try</b>	636:12 649:5
585:1 647:21	671:9 682:13	581:6,16	484:4 520:13 533:5	669:8 682:18
<b>time</b>	684:9,9 692:17	<b>travel</b>	533:6,7 536:12	686:22 690:5,17
438:13 452:22	702:21 705:23	553:3,5	550:1 554:5	690:17 700:2
467:24,25 490:8	720:24 721:7,19	<b>traveled</b>	560:13 601:23	704:5 707:18
495:23 508:7	722:1	636:21	663:18 716:13	717:6 719:18
530:19,23 531:5	<b>told</b>	<b>traveling</b>	<b>trying</b>	<b>two-thirds</b>
543:6 549:8,17	465:11 466:14	548:19,25 579:25	439:16 487:6 512:8	567:22
570:13,15 571:24	468:20 516:8	<b>treat</b>	516:18 524:22	<b>type</b>
572:7 582:7 584:3	537:1 587:16	504:24 505:3,4,10	560:14 599:4	447:5 454:18
584:6 585:23	630:2 639:18	505:14 663:19	617:9 637:9	470:14,22 474:19
587:19 589:14	656:19 662:19	697:4	<b>tubal</b>	476:7 485:19
593:10 603:14,17	<b>tolerate</b>	<b>treated</b>	633:15	505:20,23 557:3
607:10 609:7	606:18	661:10	<b>tube</b>	586:25 600:23
624:7,12 631:22	<b>top</b>	<b>treating</b>	595:24 596:1	614:3,3 615:1
668:14 673:21	635:11,12	465:10 573:9 574:5	<b>tubes</b>	616:3 617:22
675:1 678:21	<b>topic</b>	586:22 593:20,23	549:21 551:2	625:9 626:25
684:21 687:14	679:2	683:1,4,14,18	552:18 572:19	646:18 682:10,11
697:13 727:25	<b>total</b>	<b>treatment</b>	573:3 585:1 635:5	<b>types</b>
728:8	483:11,15,17 530:4	573:12 602:24	635:8,8,14,15	453:19,22,23 455:2
<b>times</b>	<b>totally</b>	606:15,22,24	636:22 647:20	475:15 476:4
441:4,8 472:2,16	518:22	608:20	<b>TUCKER</b>	490:14 495:1
472:16 473:2	<b>tower</b>	<b>treatments</b>	430:17	496:14 552:15
474:11 541:9	516:11	505:12	<b>Tuesday</b>	563:21 564:14
549:20,25 550:1	<b>trace</b>	<b>tremolite</b>	429:16	566:21 583:9
555:22 584:8,21	561:17 565:10,11	562:19,25 563:4,6	<b>tumor</b>	700:13,21,24,25
585:4 628:17	<b>tracked</b>	563:9,14,18 564:2	439:22 444:19	700:25 701:17
632:3,21 633:5	450:21,25 451:9,16	564:15,22,25	456:8,11 457:12	713:17
654:10,22 674:18	451:20,22,24	<b>trial</b>	499:2 501:7	<b>typical</b>
674:20,24 679:12	452:4	476:10,11 477:2,3	711:19 712:6	625:13
<b>timing</b>	<b>tract</b>	477:4,9 526:25	714:24	<b>typo</b>
706:1	551:1 580:11,14	576:4 580:8	<b>tumors</b>	494:12
<b>tissue</b>	581:18 582:2	610:10 720:23	453:21 454:2 455:4	
515:8,20,21 595:2	634:5 636:22	<b>trouble</b>	456:23 457:16	
595:20 596:16	665:17 682:10	702:6	498:21 505:10,10	

U

U.S

440:2 472:13,21 <b>Uh-huh</b> 554:10 622:4 <b>unaware</b> 477:11,13 <b>uncertain</b> 448:14 449:2 453:8 <b>uncertainties</b> 725:16 <b>uncertainty</b> 712:4 714:22 <b>uncle</b> 443:2 445:14,18,19 445:19 446:1,2 578:24 <b>unclear</b> 450:16,19 617:17 <b>uncommon</b> 597:13 <b>undergo</b> 624:15 <b>undergone</b> 608:21 <b>underlying</b> 529:11 532:20 538:23 539:11 <b>underpowered</b> 489:11 711:16 712:1 714:8,21 <b>understand</b> 451:11 495:24 500:19 501:2 502:21 507:18 514:10 516:20 527:19 533:4 535:5 550:19 559:17 560:12 581:24 594:20 601:23 611:16 636:7 651:17 658:6 675:15 676:10 686:18 717:5 718:9 <b>understanding</b> 483:4 501:21 502:7 502:11 534:25 602:25 628:25	689:11 <b>Understood</b> 477:10 673:22 674:6 719:6 <b>underwear</b> 552:3,12 553:3 585:17 633:5 <b>undiagnosed</b> 672:24 707:5 <b>undifferentiated</b> 479:3 <b>undiscovered</b> 548:6 671:6 672:24 673:9,24 <b>Unfortunately</b> 505:1 <b>United</b> 429:1 473:11 <b>univariant</b> 546:8 <b>unknown</b> 534:7 541:23 542:20 543:1 546:16 547:25 548:5 588:3 670:10 671:4,5,16 674:21 707:2 <b>unusual</b> 455:7 608:10 655:9 <b>up-to-date</b> 689:25 <b>updated</b> 689:17 690:9,14 <b>upsets</b> 666:18 <b>usage</b> 515:18 550:5 632:23 669:18 <b>use</b> 433:12,14,17 434:10,18 477:22 478:3 480:14 482:7 484:20 485:9 486:7 487:13 488:8 489:4,22 490:4 491:18 492:25	496:12 498:19 499:1 501:15 505:11 513:25 514:6,15 515:15 517:17 518:9 522:22,23 523:2,7 528:11,20,20 529:3,7,15 531:10 531:13,17,25 532:13 533:1,13 536:19,22 538:24 539:12 544:21 546:17 547:1,17 547:20 548:8,11 549:2,12,15,23 550:12,16,22,23 550:24,25 551:4 551:16 552:16 553:13,17 560:22 561:12 567:6 568:18 572:23 573:3 578:17 584:9,12,16 585:8 585:22 586:7,17 586:22 588:4,10 594:23 604:9,10 610:25 611:14 631:25 632:5,7 633:23,25 634:3 640:3,13,23 643:20,23,25 644:10,19 645:3,9 646:5,14 647:4,10 647:21,22 648:10 648:18,21 649:7 649:14,19,22 650:20,22 651:22 652:18 653:19,25 654:7,13 666:6,25 667:6,14,20 668:5 668:10 669:19 670:22 674:9,16 682:4,8,12 684:16 686:4,11,14,22,24 693:10,14 694:19 698:24 700:12 701:2,6,22 702:7	702:10,17 705:17 706:1,2,18 707:8 710:18,24 712:22 713:10,15,22 715:21 716:2,6,19 717:1,10,25 718:5 719:10 725:18 727:12 <b>users</b> 647:18 667:22 691:16 692:17 <b>uses</b> 487:22,23 518:12 531:4 <b>usually</b> 494:9,21 496:17,23 625:15 697:4 <b>uterus</b> 458:9 460:4 <hr/> <b>V</b> <hr/> <b>v</b> 429:11 <b>vagina</b> 580:25 581:6,9,17 581:22 666:19 <b>vague</b> 513:10 <b>vaguely</b> 452:21 661:14 <b>VALERIE</b> 429:9 <b>validate</b> 492:4 <b>value</b> 491:15 <b>variant</b> 448:13,14 449:2 450:18 453:8 <b>variety</b> 598:3 635:21,24 <b>various</b> 598:8 727:12 <b>vary</b> 529:10 650:24 <b>Vaseline</b> 662:16	<b>vast</b> 697:20 698:1 <b>verbatim</b> 728:7 <b>verification</b> 628:15 <b>verified</b> 470:24 536:23 <b>verifying</b> 628:22 <b>versus</b> 480:3 504:8,9 547:19 604:17,17 651:25 <b>viable</b> 464:24 <b>view</b> 440:7 495:9 500:3 528:6 550:4 551:22 555:21 556:7,10 557:13 561:21 563:4 578:14 588:4,7 591:17 <b>Virgie</b> 619:18 <b>virtually</b> 632:17 <b>visible</b> 570:18 600:20 601:1 602:5 607:8 <b>visual</b> 516:19 <b>Vitae</b> 434:21 688:25 <b>voce</b> 620:12 <b>VOLUME</b> 429:18 <b>vulvar</b> 661:10 662:6,16 701:6 <b>VUS</b> 448:15 450:15,21 451:5,17 453:5 458:21,23 459:2,3 459:4,10 460:12
--	---	--	--	--

461:9	<b>we'll</b>	<b>Wentzensen</b>	<b>Wolf-37</b>	519:1,14 520:15
<b>VUSs</b>	444:2 449:25	433:23 497:13,24	435:7	520:15 521:7,20
450:25 451:16	481:18 482:4	537:23 662:23	<b>Wolf-40</b>	522:15,22 525:11
<b>W</b>	490:1 497:20	664:19 665:5	433:3 444:8	525:14,22 526:5
<b>wait</b>	521:11 538:18,19	<b>weren't</b>	<b>Wolf-41</b>	527:11,13 531:4,5
520:2 539:1,1	549:19 591:25	475:9 530:7	433:6 445:9	552:2 553:11
688:6	621:22 634:18	<b>West</b>	<b>Wolf-42</b>	578:2 581:5
<b>want</b>	691:10 722:16	593:24	433:9 452:14	584:25 608:2
458:3 481:10 484:8	<b>we're</b>	<b>white</b>	<b>Wolf-43</b>	651:14 679:24,25
484:11,14 519:16	460:14 479:10	601:2,18 602:2	433:11 480:13	680:16,18,23
519:20,25 536:13	488:24 489:1,7	639:2 644:2,20	<b>Wolf-44</b>	681:15,18,24
545:13 546:7	495:24 541:24	645:5,10 646:7,17	433:14 482:7	685:16
575:2 608:25	544:20 651:17	647:6 648:12	<b>Wolf-45</b>	<b>woman's</b>
609:3 628:21,24	680:9 689:10	649:15 651:14	433:17 490:4	440:12 442:7
641:19,25 655:19	<b>we've</b>	652:4,7,12 653:21	<b>Wolf-46</b>	469:16 496:13
656:6 674:19	487:10 495:7,13	655:3	433:20 496:6	509:10,14 510:20
688:7,11 703:14	536:18,19 544:1,3	<b>whites</b>	<b>Wolf-47</b>	514:2 515:15
705:11	544:4 547:16,24	651:9	433:22 497:23	518:2 519:10
<b>wanted</b>	547:24 575:1,20	<b>Whoa</b>	<b>Wolf-48</b>	524:5 527:16,25
554:5	584:13 588:2	475:2	434:2 595:7	528:7,15,23
<b>wants</b>	589:1 604:21	<b>withdraw</b>	<b>Wolf-49</b>	529:16 531:9,19
467:22	618:23 632:11	440:8 485:2 562:7	434:4 615:6	548:4 577:23
<b>War</b>	639:9 655:21	575:17 577:11	<b>Wolf-50</b>	677:22 682:5
572:6	656:14 670:9	596:8 672:4	434:6 618:19	684:8
<b>wasn't</b>	671:9 677:13	<b>witness</b>	<b>Wolf-51</b>	<b>women</b>
449:19 543:21	679:12,24 682:13	470:7,11 480:23	434:8 634:20	440:2 450:22
616:1 649:9	684:9 688:19	481:21 508:11,17	<b>Wolf-52</b>	451:17,25 465:4,5
709:15	689:24 694:1	520:6 538:5 594:8	434:10 640:23	468:17 470:23
<b>wasting</b>	702:21 705:22	594:12 620:13	<b>Wolf-53</b>	471:10,13 472:12
512:21,25	721:1 723:6	653:12,17 676:14	434:13 655:24	472:24 473:7,12
<b>water</b>	725:10	691:4,24 706:13	<b>Wolf-54</b>	473:18 474:3,8
580:24 581:5,16	<b>weak</b>	711:5,9 722:20	434:15 661:21	513:1 550:12
582:6,7	538:24 539:13	727:24 728:11,11	<b>Wolf-55</b>	553:16 558:3
<b>way</b>	540:6	729:1	434:18 667:6	562:17 577:2,19
464:18,23,24 465:2	<b>weaknesses</b>	<b>witness'</b>	<b>Wolf-56</b>	582:15 583:6,10
465:15 469:11	695:17 696:2,4	558:23	434:21 688:25	583:12 605:25
472:19 473:4	<b>week</b>	<b>Wolf</b>	<b>Wolf-6</b>	606:13,17 611:1
497:9 511:18	549:20,25 646:15	429:18 432:2,8	435:3	643:24 644:11,14
522:14 553:15	646:15,23,25	433:20 436:5,12	<b>Wolf-8</b>	644:16,20,21
556:6 567:11	647:17	448:10 496:6	435:4	645:4,5,10 646:7
581:17 582:1	<b>weight</b>	508:22 575:9	<b>Wolf-9</b>	646:16,17,17,21
584:24 625:6,13	627:2	583:2 592:5	435:5	647:6,7,9 648:12
681:2,14 699:6	<b>welcome</b>	609:22 617:12	<b>woman</b>	648:19,20 649:15
721:17	643:3	682:23 691:9	451:6 459:18	650:21 651:9,23
<b>ways</b>	<b>went</b>	728:5 731:4,12	461:11,17 464:25	652:4,5,7,8,12,12
552:20 565:22	519:18 549:17	<b>Wolf-20</b>	468:5 471:16	652:16,24 653:7
	583:2 726:8	435:6	518:4,9,15,20	653:18,21,23,25

654:7,12,14,15,25	<b>Y</b>	455:21 621:16	512:3,17 513:17	620:24 621:20
655:1,3,11 670:6	<b>yeah</b>	623:1	514:9,23 515:10	622:1 623:10
675:7 676:24	443:18 446:1	<b>younger</b>	517:24 518:19	627:8,19 629:9,24
677:9,10 678:1	452:20 476:20	577:15 606:9	519:8,13,22 520:5	630:13 631:4
679:8 696:19	516:18 521:4	<b>Z</b>	520:10,11 521:3	632:9 633:1 634:8
697:6,19,20,24	527:3 534:9 603:2	<b>Zellers</b>	522:2,13 523:9,20	634:23 637:24
698:13 704:14	609:14 619:4	430:17 432:9,11	524:9,22,24 525:5	638:17 639:8
708:21 720:11,16	625:11 635:13	436:11 441:16	526:10,17,23	641:1,11,23 642:2
<b>Wong</b>	653:16 660:8	442:10 443:14,19	527:21 528:5	642:4,9,22 643:2
492:21	661:14 689:6	444:12 445:1,22	529:13,22 530:1,9	643:4 645:17,20
<b>word</b>	692:3 701:20	447:12 448:5,11	532:11 533:3	645:24 647:24
563:14	723:12	449:4,6,10,14,23	535:1 536:11	648:5 649:10,23
<b>words</b>	<b>year</b>	450:2,8,14,20	537:21 538:2,4,7	650:9 651:16
463:14,15 467:8	440:2 472:24	451:4,14 452:1,9	542:17 544:8	652:22 653:5
487:21,23 533:8	589:16 592:8	452:17 453:14	546:2,14 547:12	654:11 655:4,17
550:17 706:22	666:10 690:17	454:3,23 455:22	548:12 550:3,18	656:2,9 658:5
716:20,23 718:1	<b>years</b>	455:24 457:6,8,11	552:10 553:22	659:22 662:1
718:22 719:1	501:20 502:4 511:4	457:18 458:2,19	557:1,11,20	663:6,21 664:9,18
<b>work</b>	543:6,14,19 547:2	458:24 459:20	558:18,22 559:7	665:1 666:1,16
566:9 587:7 690:2	547:3 549:23,23	460:21 461:4	561:1,6,15 562:5	667:9 668:21
<b>world</b>	570:21 571:5	462:19 463:6	562:18 563:3,11	669:20 670:7,23
456:22 572:6	572:2,11 576:21	464:22 465:22	564:3,10,16 565:1	671:2,18 672:1,14
725:16	577:7 578:7,13	466:4,17 467:12	565:23 567:7	672:21 673:7
<b>worried</b>	585:4,10 593:25	467:17 468:7	568:5,19 569:2,10	674:5,17 675:14
458:6 460:2	611:5 623:15,17	469:4,21 470:5,12	570:7 571:14	676:1,9 677:2,12
<b>wouldn't</b>	623:19 632:2,3	471:22 473:24	572:21 573:5	678:5,14,24
459:1 460:18	633:23 647:10,11	475:4,7,11,18	574:25 575:8	679:10,16,22
464:13 468:19	647:21,22 648:21	479:9,17 480:9,20	576:22 577:6	680:14 681:1,23
512:25 513:25	668:25	481:1,22,23 482:3	578:11 579:12,18	682:16,22 685:2
552:21 554:4	<b>yeast</b>	482:10,12 483:1	580:15 581:11,23	686:1,8,17 687:3
577:16 600:19	664:11,15	483:24 485:1,12	582:8 583:1 585:6	687:22 688:4,13
601:8 654:14	<b>yesterday</b>	486:10,14,23	587:13 588:11	688:17,18,20
664:7	436:22 437:8	487:3,18 488:19	589:3 590:4,23	689:2 690:25
<b>wound</b>	438:20 462:3	489:15 490:1,7	591:11,16,20,25	691:17,20 692:25
622:16	470:2,7,16 471:3	492:2 493:6,13,22	592:4 593:1,8	693:4 694:7,13,20
<b>written</b>	476:18 484:10	495:3,21 496:1,9	595:10 597:8	695:3,7,14 697:23
537:24	516:25 518:3	497:20 498:1	598:1,23 599:17	698:11 699:21
<b>wrong</b>	520:14 527:5	499:18 500:2,12	600:9 601:15	700:17 701:4
467:13 468:11	534:11 541:9	500:17 501:1,18	603:20 604:6,20	702:14,23 703:11
487:25 488:1	543:4,25 548:20	502:2,19 503:15	605:10,24 607:12	703:16,21 704:9
497:8 564:24	550:11 551:8	503:22 504:11,22	608:1,6,16,24	705:1,24 706:9
649:11	553:10 560:6,11	505:15,24 506:7	609:9,14,21 611:7	707:13 708:25
<b>wrote</b>	562:2,9 577:18	506:22 507:8,12	611:15 612:3,11	709:5,17 710:13
602:19 666:25	582:12 671:10	507:14 508:9,15	613:1 614:18	711:1,12 712:17
693:17,20 720:3	684:10 690:10,14	508:18,21 509:4	615:9 616:6,12,16	713:6,24 715:4,5
<b>X</b>	<b>young</b>	510:4 511:5,22	616:18 617:4,8	715:18,24 717:4
			618:2,16,22	717:14 718:20



719:5,17 721:15 722:4,19 723:7,10 723:14,23 724:5 724:12,17 726:1 727:4,17,22 <b>Zoom</b> 431:3  <hr/> <b>0</b> <hr/> <b>1</b> <hr/> <b>1</b> 453:9 471:1 544:17 583:15 613:10,12 613:13 650:19 692:3,4 <b>1,000</b> 472:2,15 473:2,16 474:11 <b>1.18</b> 646:24 <b>1.19</b> 647:12 <b>1.22</b> 653:23 <b>1.24</b> 478:14 <b>1.34</b> 583:13 647:1 <b>1.36</b> 583:13 653:23 <b>1.53</b> 647:11,23 648:3,21 <b>1:02</b> 575:7 <b>1:12</b> 582:24 <b>1:14</b> 582:25 <b>1:24</b> 592:2 <b>1:27</b> 592:3 <b>1:47</b> 609:19 <b>1:56</b> 609:20	<b>10</b> 475:16 517:1 527:7 527:10 532:1,2,8 572:11 677:13,18 684:1,6,12 685:16 686:3,23 687:15 687:20 <b>10%</b> 517:3,16,18 540:7 <b>10.1</b> 471:12 472:7 475:1 <b>10:13</b> 508:19 <b>10:24</b> 508:20 <b>1000%</b> 471:18 <b>101</b> 429:18 <b>11</b> 524:16 525:15,18 530:23 <b>11%</b> 530:17 <b>11:43</b> 575:6 <b>114</b> 482:25 483:7 <b>12</b> 430:8 444:5 549:17 549:19 566:16 580:17 668:11,13 <b>12,000</b> 632:3 <b>1215</b> 445:7 <b>1216</b> 445:7,23 <b>122</b> 646:24 <b>13</b> 444:4 580:17 619:2 619:4,5 <b>14</b> 429:16 432:3 436:3 622:3,3 642:3 646:22	<b>1422-CC09326-03</b> 429:11 <b>15</b> 496:16 507:17 527:8 532:2 549:23 571:4 572:2 619:16 633:23 647:21 <b>15%</b> 517:1 675:1 676:21 677:14,18 <b>154</b> 668:23 <b>16</b> 549:23 728:23 <b>16-2738(FLW)(L...</b> 429:5 <b>16.9</b> 472:8 <b>17</b> 596:19,22 711:18 725:5,6,7,10 <b>18</b> 585:20 641:8 642:4 642:5 656:14 657:3 <b>187</b> 482:16 483:5 <b>19</b> 444:5 <b>1953</b> 554:22 <b>1957</b> 622:16 <b>1970</b> 584:4 <b>1980</b> 464:5,20 <b>1985</b> 633:16 634:3 <b>1987</b> 549:21 572:23 573:6 <b>1998</b> 554:19 <b>1999</b> 492:22	<b>2</b> <hr/> <b>2</b> 429:18 473:12 477:19 490:13 603:16 635:9 665:3,8 703:20 <b>2,000</b> 484:5 <b>2:10</b> 621:24 <b>2:21</b> 621:25 <b>2:50</b> 645:22 <b>2:54</b> 645:23 <b>20</b> 528:8,9 531:7 535:23 543:14 571:5 572:2 593:25 632:1 647:10,11,22 648:21 691:13 731:16 <b>20%</b> 535:18,21 536:7,8 536:8 537:12 540:7 <b>20,000</b> 440:3 <b>200</b> 479:7 <b>200,000</b> 720:11 <b>2000s</b> 568:2 666:9 <b>2001</b> 662:23 663:5,7 <b>2012</b> 563:2 564:1,24 <b>2013</b> 481:24 482:11 484:12 <b>2015</b> 549:13,20 584:4 <b>2016</b>	480:5,10 482:19 484:12,19 485:6 492:23 582:11 583:4 602:8 642:25 643:6 666:24 <b>2017</b> 602:13,14 607:10 <b>2018</b> 444:4 490:2 572:20 572:24 602:12 <b>2019</b> 493:25 494:8 496:4 689:12,17 <b>2020</b> 573:16 602:21 603:8 <b>2021</b> 429:16 432:3 436:3 497:13 498:3 537:23 602:24 640:17 643:8,13 646:3 648:8 663:4 663:8 665:6 711:14 728:23 <b>21</b> 437:5 551:2 575:23 576:6 610:2 614:11 <b>21,000</b> 440:4 <b>213</b> 430:20 <b>218</b> 430:3 <b>22</b> 437:15 595:16 <b>23</b> 448:20 477:20 576:6 <b>23,000</b> 474:4 <b>24</b> 437:15 439:18 462:13,20 463:7 <b>241</b> 496:3
--	--	--	---	--

<b>246</b> 598:7,14,19	<b>30%</b> 528:8 537:11 540:7 651:25	<b>4:41</b> 727:25	431:5	<b>51</b> 634:18
<b>25</b> 619:6	<b>300</b> 431:4 440:1	<b>40</b> 444:6 535:22 543:6 543:19 547:2,3	<b>47</b> 497:21 538:1,3,5	<b>515</b> 430:18
<b>250,000</b> 720:16	<b>300,000</b> 440:1	589:22 591:18	<b>470</b> 435:7	<b>52</b> 640:21 692:4
<b>2500</b> 431:4	<b>30601</b> 430:14	592:12 611:5 632:2,3	<b>48</b> 595:5	<b>53</b> 655:22 656:4
<b>26</b> 598:5 711:7	<b>317)237-0300</b> 431:5	<b>40%</b> 524:12 525:23 528:9 530:20 531:7 535:23	<b>480</b> 433:11	<b>54</b> 567:23 661:19 662:3
<b>269-2343</b> 430:4	<b>320</b> 430:14	<b>41</b> 445:5	<b>482</b> 433:14	<b>55</b> 567:23 667:4
<b>27%</b> 524:16 525:16,18 530:24	<b>322</b> 636:16 637:1	<b>42</b> 452:10	<b>483</b> 597:9	<b>56</b> 688:23 689:25
<b>272</b> 598:3,13,17	<b>324</b> 635:21 636:8,12	<b>42nd</b> 430:19	<b>49</b> 615:3 616:25 623:8 623:11 659:3,4	<b>5600</b> 549:25
<b>275</b> 430:9	<b>325</b> 698:12	<b>43</b> 480:11 726:12	<b>49,000</b> 474:3	<b>57</b> 623:12,13
<b>28</b> 551:3	<b>334</b> 430:4	<b>430</b> 432:5	<b>490</b> 433:17	<b>575</b> 435:4
<b>29</b> 574:13	<b>341</b> 484:22 485:13	<b>430-3400</b> 430:20	<b>496</b> 433:20	<b>58</b> 458:7 460:3
<b>29.5</b> 644:20 645:5 651:25	<b>35%</b> 651:25	<b>436</b> 432:6,9 435:3	<b>497</b> 433:22	<b>590</b> 432:22
<b>2B</b> 606:13 607:6	<b>35.8</b> 644:19 645:4	<b>44</b> 482:5	<hr/> <b>5</b> <hr/>	<b>591</b> 432:23
<hr/> <b>3</b> <hr/>	<b>36</b> 725:8,11	<b>440</b> 430:13	<b>5</b> 471:15 475:14 527:9 532:1,8 554:9,16,17 647:3 684:1,6,12 685:16 686:2,22 687:15 687:20 721:8	<b>595</b> 434:2
<b>3</b> 476:23 477:17 596:3,25 606:14 607:6	<b>36104</b> 430:4	<b>444</b> 433:3	<b>5%</b> 472:22	<b>5th</b> 689:12,16
<b>3,000</b> 484:5	<b>37</b> 470:3,4 474:18 583:11 703:14	<b>445</b> 433:6	<b>5.17</b> 471:7 474:21	<hr/> <b>6</b> <hr/>
<b>3:37</b> 682:20	<b>39</b> 524:12 525:9	<b>45</b> 490:2 585:10	<b>5.50</b> 472:8	<b>6</b> 436:23 437:6,16 463:10 720:13
<b>3:49</b> 682:21	<hr/> <b>4</b> <hr/>	<b>4500</b> 484:6	<b>50</b> 618:17,24	<b>6.6</b> 668:25
<b>30</b> 511:4 535:23 543:6 543:14,19 574:8 583:9 589:22 591:17 592:11 680:10 728:11 729:16	<b>4</b> 483:3 524:10 583:7 596:17 598:10 606:14 607:7 635:18,23 645:13	<b>452</b> 433:9	<b>500</b> 472:16 473:2	<b>6/18/21</b> 434:2 595:7
	<b>4,000</b> 484:6	<b>46</b> 496:2 576:21	<b>500,000</b> 474:8	<b>60</b> 577:7 578:6,7,9,10 578:13 632:2
	<b>4/18/19</b> 434:8 634:20	<b>46-year</b> 584:5		<b>60-year</b> 578:2
		<b>46%</b> 525:9 530:17		<b>60%</b> 535:19,22
		<b>46204</b>		

<b>605</b>	432:15	<b>929</b>		
638:1	<b>731</b>	635:17,20 637:25		
<b>60s</b>	432:16	<b>932</b>		
568:2	<b>732</b>	596:16,19 597:9		
<b>610</b>	432:17	<b>949)688-1799</b>		
435:5	<b>75%</b>	430:10		
<b>615</b>	606:13			
434:4	<b>7th</b>			
<b>618</b>	494:8			
434:6				
<b>62</b>	<b>8</b>			
613:4	<b>8</b>			
<b>62-63</b>	483:22 575:20			
613:9	576:7			
<b>634</b>	<b>8,525</b>			
434:8	483:22			
<b>640</b>	<b>8:53</b>			
434:10	429:19 436:3			
<b>655</b>	<b>80</b>			
434:13	549:14			
<b>661</b>	<b>80s</b>			
434:15	543:20 546:22			
<b>667</b>	<b>815</b>			
434:18	484:2			
<b>688</b>	<b>85%</b>			
434:21	677:20			
<b>691</b>	<b>87</b>			
432:10 435:6	572:19			
<b>699</b>	<b>877.370.DEPS</b>			
507:16	429:24			
<b>7</b>	<b>9</b>			
463:8 498:14 656:5	538:13 539:4,5			
<b>7/9/2024</b>	610:12 619:17			
728:22	<b>90%</b>			
<b>70</b>	697:24			
530:20,23 549:14	<b>90071</b>			
<b>706)354-4000</b>	430:19			
430:15	<b>90s</b>			
<b>709</b>	666:7			
432:11	<b>91%</b>			
<b>722</b>	542:8 544:10			
432:12	<b>917.591.5672</b>			
<b>728</b>	429:24			
432:14	<b>92660</b>			
<b>730</b>	430:9			